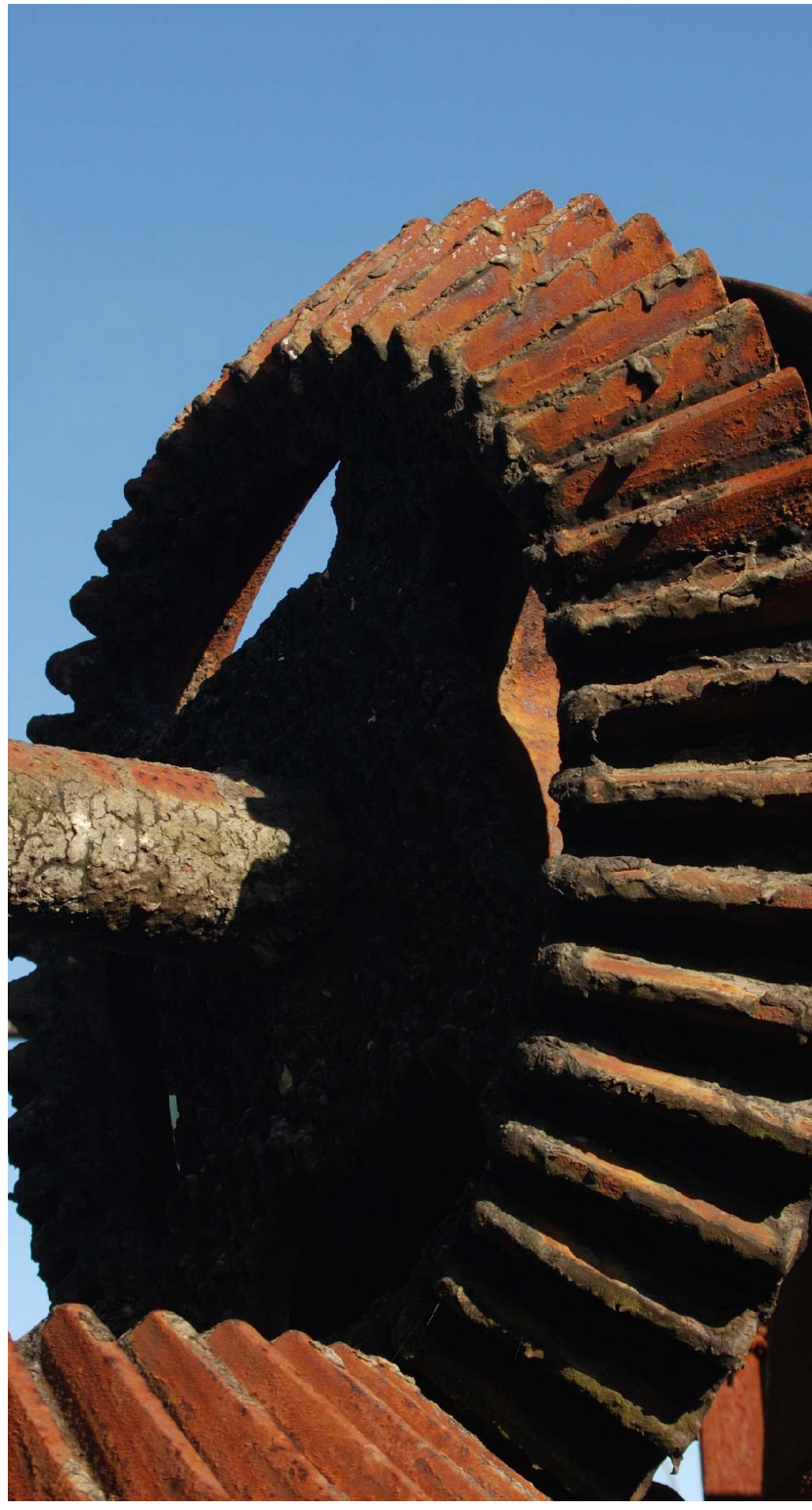
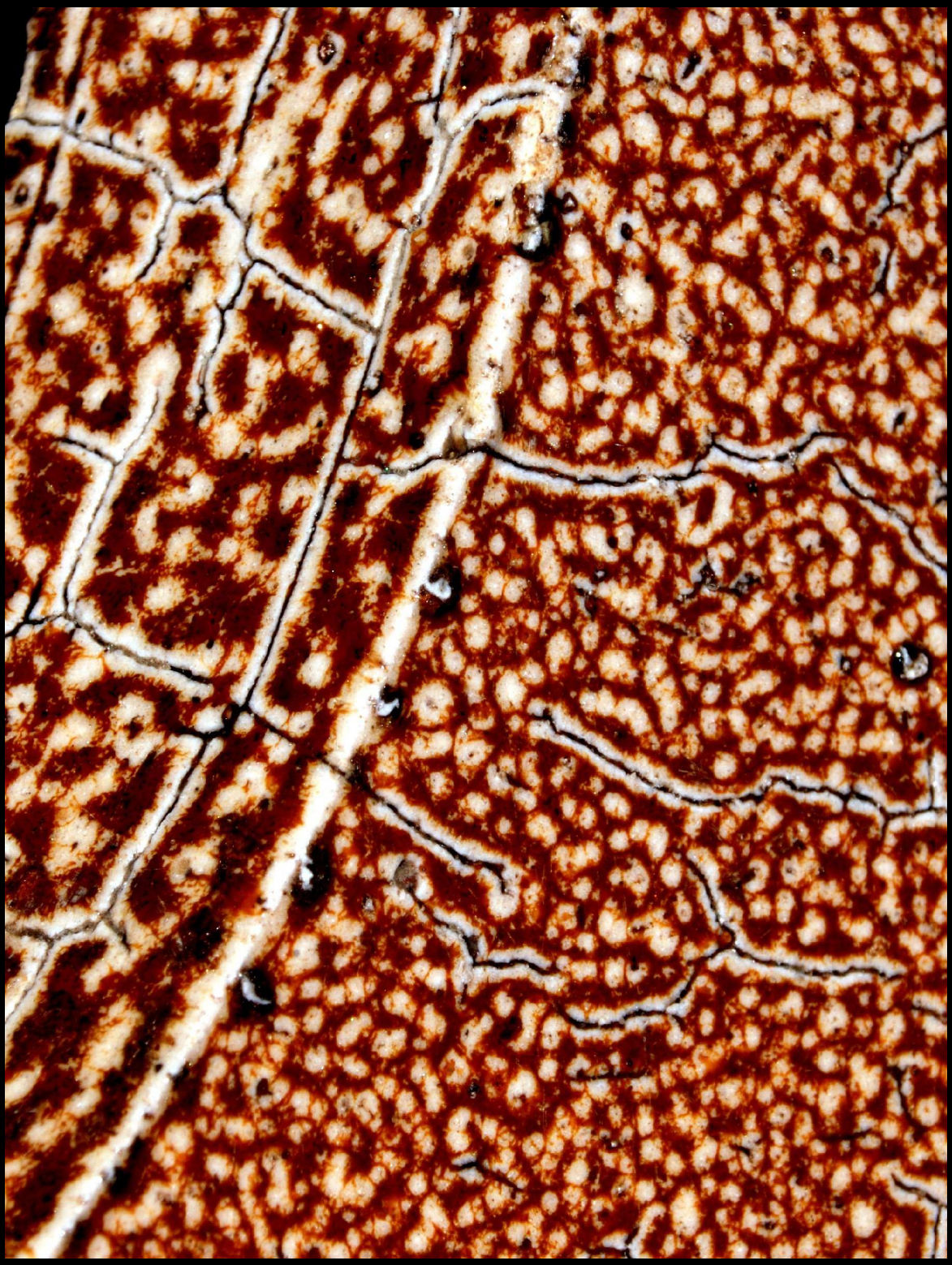
COLONIAL SALTGLAZE

Objective Industrial Abstraction

Tim Caulton



Heavy Clay Machinery
Ambrico Kiln site.
New Lynn.
Auckland, 2011.
(TC)



Salt glazed pipe fragment
H. 40mm
(TC)

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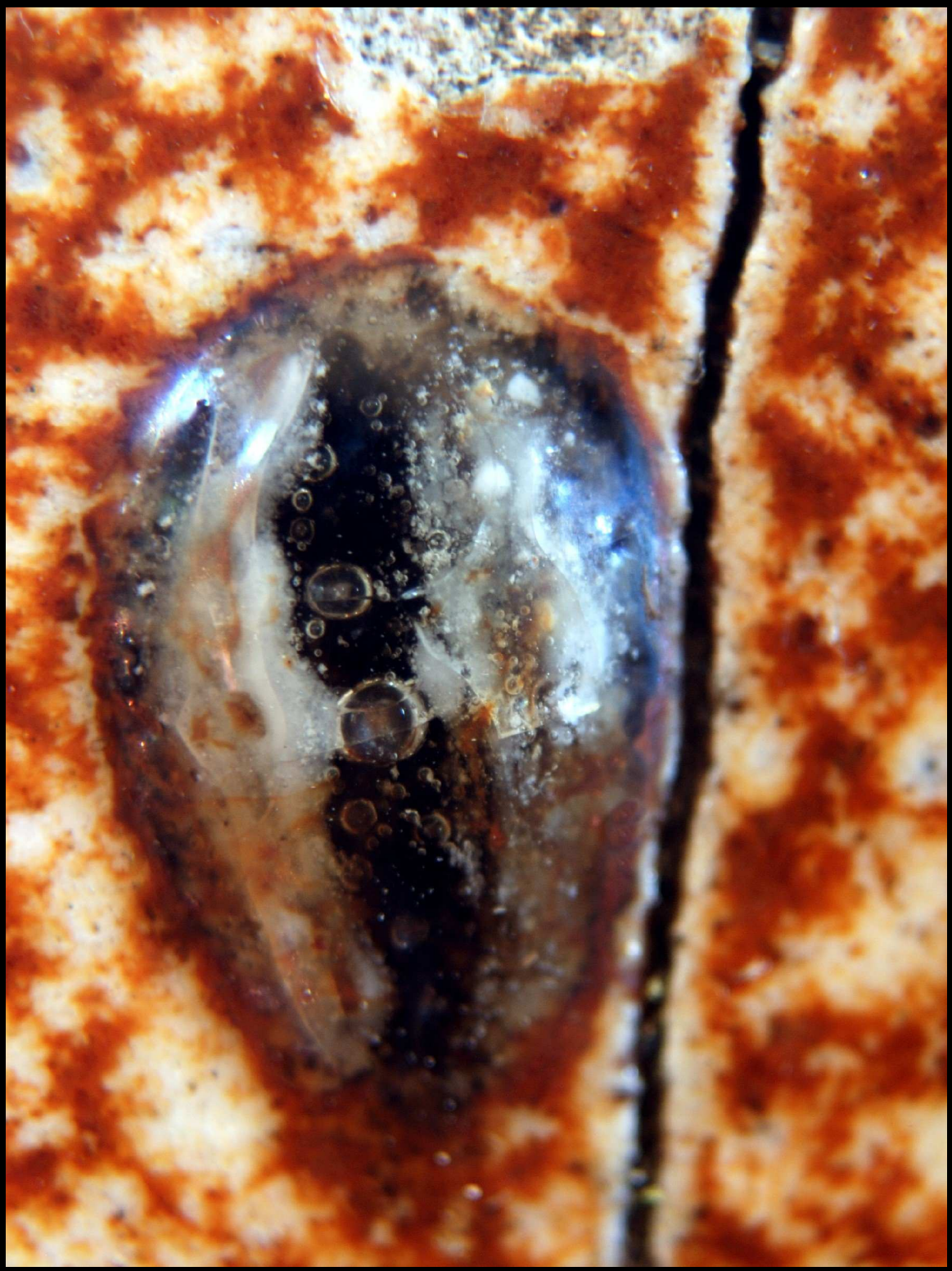

Salt glaze gem droplet
H.10mm
(TC)

Crum Salt glazed dog
CG002454
circa 1910
H. 186mm
Image courtesy of Te Papa Tongarewa.

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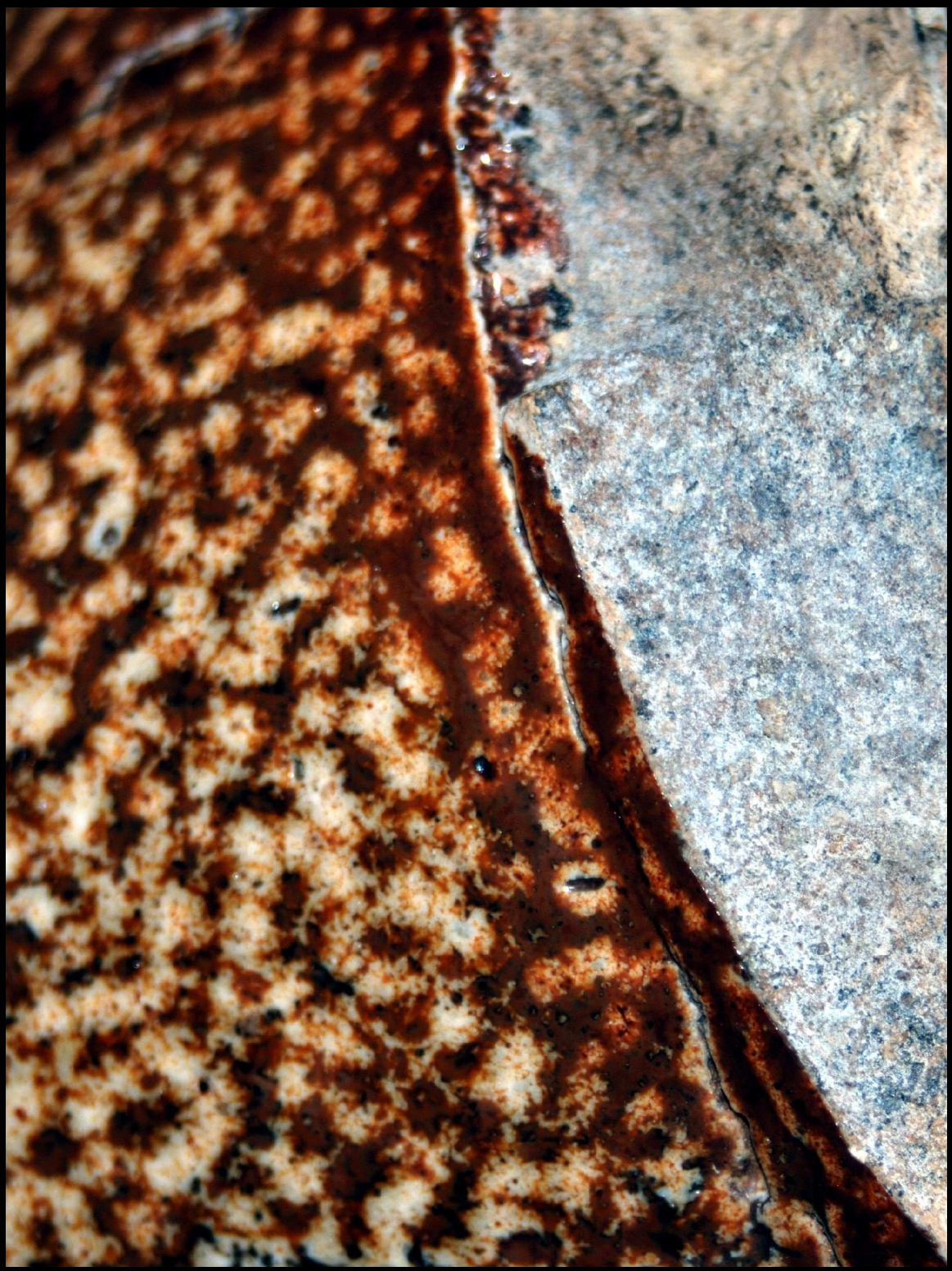


Salt glazed pipe fragment
H. 45mm
(TC)

Discovery

The idea of a book on New Zealand industrial salt glazing developed when I realized there was very little visual information about glazed sewer pipes and other objects these industrial kilns produced.

I had been introduced to the topic by a backwards process of collecting early studio pottery fired at Crum Brick, Tile and Pottery Co. Ltd. New Lynn, Auckland. These pioneer studio potters under the tutorage of Robert Nettleton Field included Peter Stichbury, Terry Barrow, Graeme Storm and Len Castle.

The pots had to be carefully brought to the salt glaze kilns of Crum and placed in prime positions where characteristic orange peel surfaces formed, often accentuated by drops of accumulated sodium alumino-silicate from the kiln ceiling.

Early examples date from 1948 to the mid 1950's when the practice was stopped by Crum management. This cessation was not absolute.

Salt glazing was the primary means of making sanitary sewage pipes and fittings dating from the mid 1800's onwards. New Zealand's need for pipes that didn't pollute ground water and resisted acidic conditions were a vital requirement for a growing colony. Open sewers were a constant source of water borne disease and these pipes solved this problem.

West Auckland was a main centre for this commercial enterprise. Good clay deposits, access to river systems for transport and numerous brickworks for kilns resulted in a major industrial boon for the heavy clay industry.

The history of these early kilns at Hobsonville, and later in New Lynn has been well documented, some in unpublished reports and theses, others in books on New Zealand commercial pottery and general histories of the area. I felt it was not my role to repeat this process, but instead to look closer at the objects that remained behind from an essentially European colonial artifact heritage.

Some fragments were found in and around New Lynn, especially at the Taylor Street kiln site, now covered with houses. Others on the outskirts of the New Lynn industrial zone. These areas have now been developed mostly into car parks, supermarkets and railway tunnels. Others were found scattered along the beaches near old kiln sites, industrial demolition refuse smoothed over by the sand and tides.

The title of this publication Colonial Saltglaze: Objective Industrial Abstraction has been my guide through the different ways of seeing this topic. I wanted to celebrate the beauty of salt glazing but more so the industrial relics I had discovered on a multi year journey of discovery.

Colonial Saltglaze is directly linked to Colonial Shino and American Shino terminology. I feel it gives the topic a context and categorizes it in a time frame of new discoveries, advances in technology and references to the past. Also it relates to my personal experiences with collecting New Zealand shino glazed ceramics and comparing them to Japanese originals. A similar condition exists for salt glazed ceramics where New Zealand versions have subtle differences in style and application to European examples.

Tim Caulton, April 2012

Bellarmine Mask
circa 1400-1600
Germany.
H. 45mm
(TC)

Cardinal Roberto Bellarmino
AN457952001
Portrait of Cardinal Roberto Bellarmino, seated on a chair at a table.
After Rubens by Schelte Adamsz.
1600-1659
H. 382mm, W. 261mm
© Trustees of the British Museum

A Brief History of Salt Glazing

The history of salt glazing begins in the 12th - 13th century when low fired salt glazed pots appear in the Rhineland of Germany. By the 15th century salt glazed stoneware was being produced in the towns of the Westerwald, Siegberg, Cologne, and Raeren in Flanders. Essentially this was domestic pottery such as jugs, bottles, and mugs. But vessels of all designs were most likely made for what ever was required at the time.

The most famous examples of German salt glazing are the Bellarmine or Bartmann bottles and jugs. Storage bottles and jugs decorated with sprigs of medallions, botanicals, and usually a bearded man on the neck. The quality of the decoration could vary widely from the finely crafted to the very crude and at times non existent. The name Bellarmine is generally considered to be in reference to Cardinal Roberto Bellarmino (1542-1621), a leading religious figure of the 16th century. Pre Bellarmino the bearded man was probably a generalized image of the wild or green man.

German salt glazed stone ware was widely exported throughout Europe, the British Iles and eventually America and Australia. The technological aspects of this pottery were not lost on foreign potters. Vitreous, acid resistant, and durable plus a simple glazing technique lead to both English and French potters adopting the techniques.

By the mid 17th century migrant potters from Germany had set up kilns in England producing German style stoneware and by 1671 Englishman John Dwight opened Fulham pottery in London producing similar wares to the migrant potters. Salt glazing had also arrived in France at La Borne and America.

Frechen Bartmann Bottle
713-1908
Salt glazed Frechen stoneware bottle with mottled dark brown glaze and rosette medallion.
Production date 1650-1680
H. 229 mm
© Victoria and Albert Museum, London

Raeren Panel Jug
772-1868
Raeren salt glazed stoneware panel jug.
Decorated with with moulded applied decoration.
Made at the Workshop of Jan Baldems Mennicken.
Production date 1598
H. 426 mm
© Victoria and Albert Museum, London

Westerwald Jug
805-1868
Westerwald salt-glazed stoneware with
impressed and applied relief-moulded decoration,
embossed and engraved silver mounts.
Made by Jan Emens Mennicken (1540-93)
Production date 1591
H. 312 mm
© Victoria and Albert Museum, London

Fulham Jug
C.590-1925
Jug of salt-glazed stoneware with a brown glaze. Pear-shaped body with a medallion in relief of a fleur-de-lys surmounted by a crown and 'C.R.'.
Made by John Dwight's Fulham Pottery.
Production date 1675
H. 213 mm
© Victoria and Albert Museum, London

Production in England moved to Lambeth, London by the 18th century and European designs were reinterpreted in an English fashion. Many objects were produced, including figures, money boxes, spirit flasks and ink wells. Jugs and tankards often featured sprig decoration of hunting scenes and the harvest.

There was also a more refined salt glazed pottery which proved popular, white salt glazed stoneware decorated with overglaze enamels as and alternative to expensive porcelain.

The 19th century saw the greatest level of production of salt glazed wares in England, lead by Henry Doulton's sanitation revolution. Vitreous sewer pipes replaced open sewers and leaky earthenware pipes which polluted ground water. Salt glazed water coolers, ginger beer bottles, basins and sinks meant bacteria found it much harder to gain a foothold compared to relatively porous earlier wares.

Previous page: **Pair of Lions, Derbyshire**
C.7&A-1975
Pair of flat-backed figures of lions standing in front of trees, dark brown salt glaze with contrasting white clay details on the eyes, teeth, leaves and foreground.
Production date 1800-1830
© Victoria and Albert Museum, London

This page
Lambeth Jug
3784-1901
Lambeth London salt glazed jug of Lord Nelson
Medal inscribed "NILE 1798".
Production date 1845
H. 305 mm
© Victoria and Albert Museum, London

Colonial pioneers in New Zealand would have seen the benefits of this in a rapidly growing colony with Doulton Lambeth wares imported from England. By the 1870s potteries were established at Milton, Benhar, Christchurch, Wellington and Auckland all producing salt glazed stoneware.

Along with sewer pipes and sanitation products other more decorative items were produced. Minimalist cylindrical ink bottles with hand molded tops, finer than their imported English contemporaries. Large storage pots with wooden lids, elaborate garden edging, tree stump vases, high fashion boots, handled posy baskets, mantel dogs, horse heads, water coolers, wedding gifts, sprigged jugs and vases, hand basins, decorative bricks, chimney pots, finials and balusters. No doubt there were many other one off items produced as well.

English Face Jug
C.493-1919
Salt glazed face jug.
Made by the Martin Brothers at Southall.
Production date 1906
H. 215 mm
© Victoria and Albert Museum, London

English Inkpot
3768-1901
English salt glazed inkpot of an old woman wearing a close fitting cap.
H. 60 mm
© Victoria and Albert Museum, London

By 2011 what remains behind of the foundation industries of New Zealand? The kiln sites are mostly gone, many built over, destroyed and in ruins. Over grown with 20th Century progress, houses, car parks, and motor ways. Auction houses contain some of the more recognizable artifacts. Demolition yards may have stock piles of salvaged pipes and traps. Salt glazing is now fully taken over by ceramic artists and studio potters. Many moving away from salt and on to sodium bi carbonate. What will the next 100 years leave behind?

Helen Perrett Sitting Dog
Soda glazed.
2009
New Zealand.
H. 215mm
(TC)

Pumice brick salt kiln
Auckland.
2008
(TC)

Georgina Caulton salt glazed bottle
Auckland.
2008
H. 240mm
(TC)

Salt Glazing for Salzbrand

As a schoolboy, I lived in Devonport, not far from a coal-gas works with its associated firebricks works alongside. The big rectangular 10-firebox kilns with their vast thick walls and underground flues to the tall stack were fired with coke, a by-product of the gas works. Although salt was not used, the heat in the fireboxes was so utterly intense, in order to achieve a full 1300°C in the kiln, that a rich brown coke-ash glaze built up on the sintered firebrick-work which was of captivating beauty, texture and lustre. The boss told me that salt must never be put into the firing as this would glue everything together. Unwittingly, he had given me an appetite for the technique of salt-glazing and told me firmly where to go to see it being done.

Over the next 10 years, I made frequent trips to the West Auckland area, New Lynn, the centre of a long-established, then coal-fired brick and glazed pipe works, with the comparatively modern Crown Lynn pottery plant alongside. The latter held no fascination for me; it was those dark, gloomy old kilns, heaps of dirty coal, deep red-glowing flues, choking black bituminous coal smoke and richly incandescent interiors seen through rough brick spy-holes, which was so utterly captivating.

I had been introduced to an older potter, Len Castle, who was one of the very first of our new generation "craft potters" and whose big wheel-thrown container forms were being salt-glaze fired in one of the industrial kilns at New Lynn's Crum Brickworks. As he let me examine the rich beauty of the iron-spangled browns, orange-peel translucent "celadons", mahogany manganeses and subtle blue-over-slip salt-glazes, I began to know that I simply had to do this all by myself.

However, my parents' suburban back yard was not a good place for recreating a miniature colonial style complex, so for shiny black acrid-burning, free-gassing bituminous coking coal, I substituted old sump oil for fuel and settled for only a "modest" sized kiln. As it happened, the neighbours copped just as many, if not more black smuts, and just as much salt fumes, but at least it was cheap.

I managed to get to grips with drip-feed oil-fired salt-glazing despite neighbour reaction, parental powers-that-be and much foaming and sticking problems with carbide kiln shelves, yet somehow, the glazes were just too clean. Also I could not achieve those rich semi-viscous, semi-translucent orange peel effects with iron spangles into the bargain that the coal-fired glazes gave. I wanted salt-glazes that reminded one of coarse tweed suits on important little men, but I did get nice rich runny suits and one or two collars and ties too. I learned a lot about different local clays as well as the salting process itself.

One of the severest lessons was with the high silica, yet very plastic stoneware clays from the local Auckland weathered sandstones. Len had been making marvellous big pots with a grey variety of this clay, but when I used some, it shattered and cracked to bits after firing. He forgot to tell me to add 10% feldspar.

I also developed a passion for coarse grogs and other texturing additives because of the granitic beauty of old rough firebricks and retorts which had become caked in ash-fluxed glazes.

I had some of my first "successful" pots rejected by an exhibition selection committee and am still recovering from the surprise. It must have been a bit much – salt-glazing over clay, fissured and lumpy with grog, resembling the chaos breccia of the local Waitakere cliffs.

It was not until after I moved to Coromandel in 1961 that my first real, proper coal-fired, salt-glazing kiln was achieved; made possible with an Arts Council grant. My second attempt at a "profession", school teaching, ended again as a kind of disaster. Within the first year of the Coromandel High School job, I retired and took up full-time pottery with a small, crude oil-fired drip-feed kiln and using local clay. This kept the bank manager and the tax man at a mere arm's reach.

Len Castle kitchen bottle
Fired at Crum Brick, Tile & Pottery Co. Ltd.
circa 1950
H. 240mm
(TC)

The big round salt-glaze kiln of 1963, two metres interior diameter, with three fireboxes, resembled one of the old New Lynn kilns, sacred temples of the highest religious order and mildly satisfying to my mind. The West Coast bituminous, swelling, coking coal had to come by boat, then truck, in bags to my kiln. It had already been shipped up for the gas works. This kiln fired well and its underground flue glowed with just the same magic, ghostly incandescence as its big brothers.

My major problems were unannounced visitors at the climax of these stage settings – a cool night outside, yes, but for me, near nakedness was all I could manage as I danced from firebox to firebox with the de-clinkering iron and stoker's shovel, hell bent. Such a spectacle, so totally alien to the local traditions of a small country town, enhanced by voluminous, choking, drifting, swelling white fumes of chloride smoke, was not easy to explain. My embarrassment was almost complete the evening when my new neighbours suddenly appeared, fresh from the UK Midlands, bent on a clean, healthy life-style in the rural bliss of Driving Creek, Coromandel, demanding whether this was another version of Clapham Junction (or somewhere) to which they had descended. Why, for God's sake, did the wind have to veer in their direction at that crucial time of the evening?

In 1968, my friend Yvonne Rust decided to migrate to the West Coast, becoming the Art Teacher at the Greymouth High School. She asked me to build a salt-glaze kiln near there, at an old brewery which she rented as a studio. With alacrity and panache I did just that, as this was a source of the ultimate coal and clay for salt-glaze firing. I quarried for firebricks from the remains of old coke ovens, now preserved as an Industrial archaeological site, at Brunner. (I re-discovered this site – ha, in 1964, from a photo in my old geography book).

In 1969, Yvonne went away and invited me to use this kiln, which was a climax in my salt-glaze life. I got through two railway wagon loads of coal and made the most exciting salt-glazed sculptural pots in my life, living like a hermit and using all locally-dug materials. The kiln was a geodesic beehive built using tapered firebrick blocks from the old coke ovens and with two opposite fireboxes.

Back at Driving Creek, I decided to re-build the salt-glaze kiln on my friendly farmer-neighbour's place, away from my nice, but understandably touchy nearer neighbours. I had to construct a half kilometre long, narrow-gauge railway line to the site in 1970. By this stage, I had developed coiling as my favourite technique for large and more adventurous sculptural forms in clay. This followed on from the work at Greymouth, where I had explored the application of sprayed slips onto the forms, to give a natural variation in sympathy with them. This was my last salt-glazing kiln and was dismantled in 1972 after many good firings, without neighbouring problems.

Bituminous coal was no longer available as all the gas works had converted to naphtha oil and later to piped natural gas. I therefore converted to wood and in 1973, built the first wood-fired stoneware kiln in New Zealand at my new – and present property. This kiln is preserved, though now caked in ferns.

The dramatic charm and sensual battle with coal-fired salt-glaze continues to live in my mind and recently I designed and built an experimental kiln for non-coking local coal, using a forced draught firebox. It worked, but lacked the magic charm of the natural draught kiln with its quiet rumbling roar and incandescent bed of white-hot spent-coal coke which forms such a magnificent bed on which to throw the coarse-grained butcher's salt.

It crackles and decrepitates as it vaporises in the searing heat of the fire, combining with the trace of titanium in the coal, with some iron ash flying over to give it a spangled orange-peel twee, thus converting one's humblest "pottiewinkle" into a national art treasure.

I can't stand it much longer: while wood-fired terracotta has been my fifteen years' glad pursuit, the call of the coking-coal-fired, salt-glaze sounds like a distant, approaching steam chime-whistle over the hills. We will do it again. If not with the panache of youth, at least with the crumbling wisdom of middle age.

Salt glazed pipe fragment
H. 25mm
(TC)

So long as I can hold, grasp, choke, fling and clang a shovel, see cross-eyed through a real brick spy-hole and enjoy a poker-hot mulled dry-earth wine from the ash pit, I will keep doing it. I didn't come to pottery through "art", but instead by way of the devil of fire, furnaces, smoke grime, dust, black, smells, cinder and smuts. With engineering to make it real.

Barry Brickell, Coromandel, 1986

An update

Thanks for the copy of my rather "forescent" article on salt glazing. I have advanced from then, now using baking soda (sodium bicarbonate), which is non-polluting. It comes in 25 kg bags, used by farmers. A little more expensive than "common salt" (sodium chloride), it still gives same quality of glaze. Sodium carbonate "washing soda" is not so good as it comes in larger crystal sizes that need grinding up before introducing it into the kiln. The bicarbonate comes in the form of a powder and is not so diliquescent (moisture attracting).

Introducing salt into the kiln is best done using a length of angle iron along which the salt is spread. On thrusting it in gently, it should be turned slowly so as to cause the salt to fall as a "curtain" against the incandescent brick wall behind the firebox. It then can volatise without melting as blobs of molten salt running down into the firebox.

We use the "Phoenix" type kiln design for salting, using pine wood fuel. It is very successful, but I still yearn for coal-fired salting, which is still done by Ian and Sue Dalzell at Kotuku on NZ's West Coast. Perhaps the only such kiln left in the world of studio pottery. But because it is a "dirty" and labour-intensive process it is often ridiculed by the contemporary pottery movement. When will I cease to be a rebel and become a conformist? Never!

Barry Brickell, Coromandel, 2012

Len Castle salt glazed vase
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1950's
H. 270mm
(TC)

Bartmann Jug
2006AH0316
Salt glazed stoneware with applied moulded decoration.
Köln, Germany
circa 1540
© Victoria and Albert Museum, London

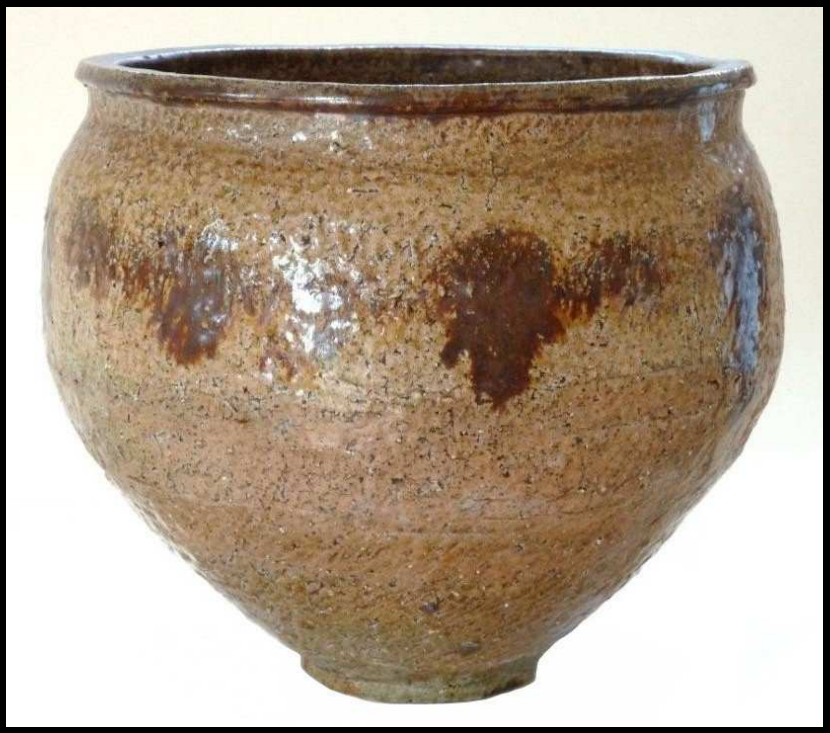
Graeme Storm Bellarmine bottle
Salt glaze with sprigged medallions and face mask.
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1962
H. 310mm
(GS)

Graeme Storm recollects

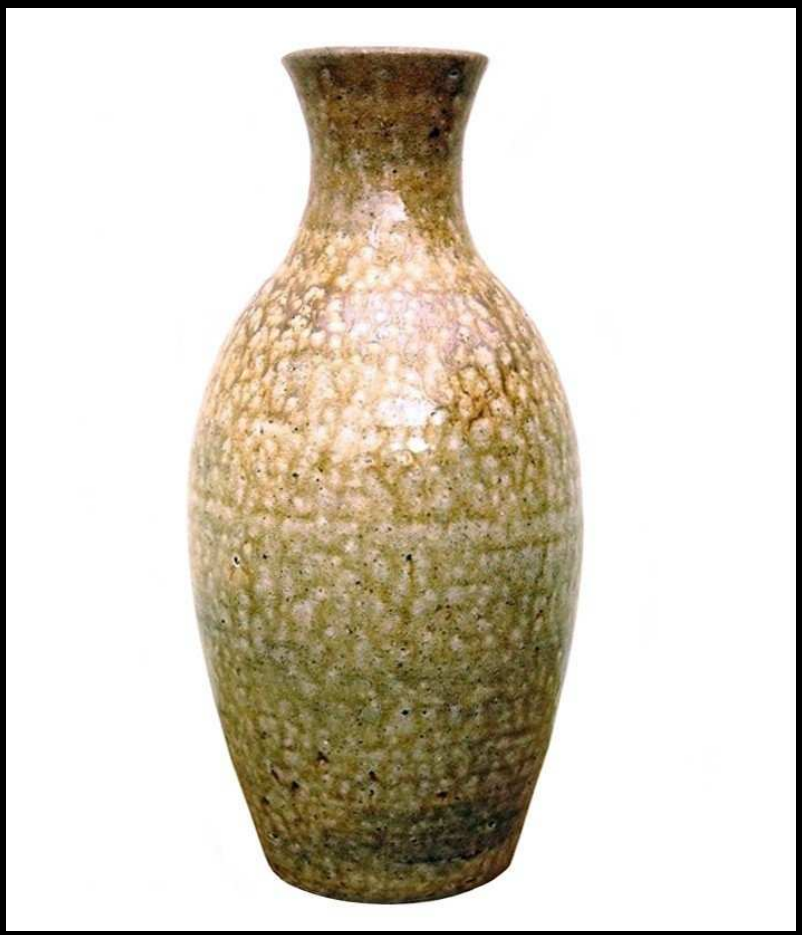
I probably had about 10-12 pieces fired in the saltglaze Crum kiln during the 1950s – only one of which was a Bellarmine. I made several lamp bases for John Crichton's interior decorating shop; a large coiled planter decorated with Piha iron sand (which I still have); and 3 other pots. Len introduced me to Ian Crum who kindly used to fit a pot into the upper stacks of the kiln from time to time on an "all care but no responsibility" basis. I do recall that the interior of the kiln was a beautiful sight to behold after its many salt firings. I would love to have had some of those bricks when the kiln was demolished!

My Wife Jacquie, who was teaching art at Kelston Intermediate in the 1960s also had some children's tile work fired in the Crum kiln. Lovely big chunky slabs which she had in her art room for many years. Where they are now – who knows?

Graeme Storm blue vase
Salt glaze over cobalt slip.
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1950's
H. 230mm
(GS)



Graeme Storm coiled planter
Salt glaze with Piha iron sand splashes.
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1950's
H. 310mm, D. 370mm
(GS)



Graeme Storm lamp base
Salt glazed.
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1950's
H. 300mm
(GS)

It was probably the photograph in Leach's "A Potter's Book" that originally introduced me to Bellarmines. I later discovered them in London antique shops during my initial travels abroad in the late 1950s. In fact it was in a junk shop there, that I purchased my first example. What I think appealed to me about them was their casual appearance. They are often misshapen due to firing "incidents", but they always have character and their masks and seals vary from beautiful through humorous to grotesque. The glazes too have such variety. From pale grey/whites to strong dark Tiger ware effects. Museums like the Victoria & Albert, The British, and the London, all have fine examples of these German salt glazed wares – more commonly identified in Europe as Bartmannkrug (Bearded Man Jug)

Graeme Storm Bellarmine Jug
Salt glazed stoneware with
face mask and iron slip.
Fired in his back yard kiln.
Auckland.
(GS)

Graeme Storm Bellarmine Jug
Salt glazed stoneware with face mask,
medallions, and cobalt slip.
Fired in his back yard kiln.
Auckland.
(GS)

Graeme Storm Bellarmine Jug
Salt glazed stoneware with face mask and medallions.
Fired in his back yard kiln.
Auckland.
(GS)

Through a contact at the British Museum I was introduced to an elderly gentleman known to the staff as “Stoneware Thomas”. He lived in Hampstead and had a magnificent collection of Bellarmines which he graciously allowed me to handle. He also pointed me towards the auction houses of Sothebys & Christies where from time to time good examples of these wares appeared, which I could examine for free, even if I couldn’t afford to buy.

Graeme Storm Bellarmine Jug
Salt glazed stoneware with face mask,
medallions, and iron slip.
Fired in his back yard kiln.
Auckland.
(GS)

Graeme Storm Bellarmine Jug
Salt glazed stoneware with face mask and medallions.
Fired in his back yard kiln.
Auckland.
(GS)

On later visits to Europe, the Netherlands and Germany proved to be fruitful countries in which to track down salt glazed wares. Cologne, Frechen, Siegburg the Westerwald – all areas where salt glazing kilns existed – have museums with wonderful examples of the wares. Not surprising of course, since it was in Germany that this technique of glazing with salt was invented. When the wares eventually arrived in England, John Dwight a Fulham potter, started making his own salt glazed wares, including Bellarmines and in fact took out a patent to prevent others from copying.

Graeme Storm Bellarmine Jug
Salt glazed stoneware with face mask.
Fired in his back yard kiln.
Auckland.
(GS)

Graeme Storm Bellarmine Jugs
Salt glazed stoneware with various glaze effects.
Inside his back yard kiln.
Auckland.
(GS)

The fact that Bellarmines became so widely dispersed around the world from their original source was due in part to the fact that they were carried on vessels of the Dutch East India Company, travelling to Batavia (Jakarta) via the Cape of Good Hope. So, the pots ended up in South Africa and also around the Spice Islands. Examples can be found in Java, Sumatra and the Celebes to this day and they have been dredged up wherever East Indiamen had the misfortune to be wrecked - even off the Australian coast.

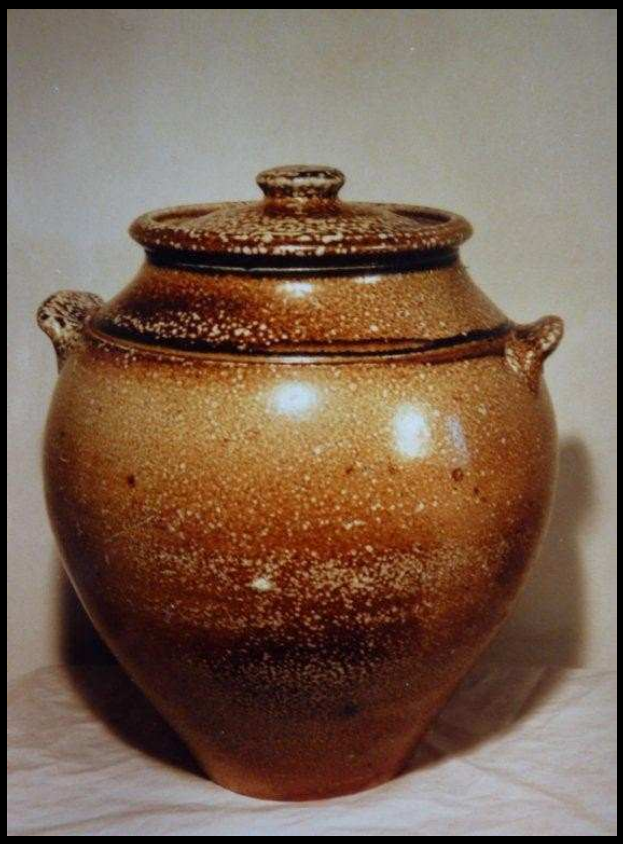
Graeme Storm Bellarmine Jug
Salt glazed stoneware with face mask and medallion.
Fired in his back yard kiln.
Auckland.
(GS)

Graeme Storm Bellarmine Jug
Salt glazed stoneware with face mask and medallion.
Fired in his back yard kiln.
Auckland.
(GS)

Having seen so many of these salt glazed jugs over the years, with their different face masks and seals, and varying body colours I was prompted to begin making some myself. At first I glazed them with ash and fired them in a stoneware kiln. Later I took to building small, temporary salt kilns out of my garden incinerator bricks, to see if I could replicate some of the effects seen on the originals, using different slips, iron pours and oxides, under the salt glazing. It has been a fascinating process and taught me much about how the original surfaces were achieved.

Graeme Storm, Auckland, 2012

Back yard salt kiln
Built by Graeme Storm.
Auckland.
(GS)



Paul Tobin salt glazed pots.
Images and text courtesy
of Howard Williams.

Paul Tobin on Salt Glazing

Salvaging bricks from a coal-fired salt chamber at Driving Creek Railway in 1973, was a torturous introduction to the effects of salt.

A sparkle in the surrounding debris revealed a broken wine beaker, permanently etched, cobalt speckled, flecked with orange and green. This fluid form, informal, but complete, remains an inspiration.

I wood-fire an 80 cubic foot glost chamber to stoneware and then side-stoke the 60 cubic foot salt chamber. The glost is best after 16 to 17 hours. Side-stoking begins after the glost firebox is almost burnt clean and left open, as a small oxidising flame is started in the second chamber and continued for half an hour.

This last chance to oxidise, avoids smoke staining the porcelain as the temperature rise is rapid – 1,000 to 1,200 degrees in 1½ hours. Fired to Orton cone 2 in 2½ hours and then salted, usually about 20 kilos in paper parcels. This gives time to close the door before salt starts spitting back at the stoker.

I began salting in the bisque chamber of my wood kiln four years ago and enjoy the variation between the salt and the glazed ware in each firing. Hand built and thrown planters, crocks, bottles and beakers are my favourite shapes for salting, the uncluttered simplicity of shape is enough, the salt does the rest.

Salting amidst the variety of contemporary ceramics sets its own limits. Twelve, or 200 year old saltware lives a quiet longevity outside the popularity of the day.

Paul Tobin, Colville, Coromandel, 1985

Proceeding page: Glaze detail
Salt glazed garden edging showing decorative forms.
H. 50mm
(TC)

An interview with Ian Crum

The following interview was recorded on the 29th May 2012 by Tim Caulton

The book 'Fire on the Clay' by Dick Scott talks about your Grandfather Albert Crum and his sons. Where do you fit into the family and business?

Albert Crum moved up from Ashburton in 1905 and started a brickworks in New Lynn (Auckland) in partnership with a man by the name of Friedlander. This was not a spur of the moment enterprise. It had been planned in the 1890's, and he had five or six years of research before they came up. He bought a piece of land where there had been an existing small pottery which later became New Zealand Brick and Tile, Ceramco and it's changed its name a few times, but it's a bit of land bordering Clark Street and Margan Avenue at the back. He started his business, did very well. He made quality ware. He refused to make a lot of the stuff of the quality from the Ponsonby area. He wanted to make top class ware, and he did this and it was very successful.

He sold out to the Clark family when they wanted to form an amalgamation of all the brickworks throughout New Zealand. He sold out for a personal reason and was not allowed to open another brickworks within fifty miles of Auckland. South of Auckland there was a big brickworks there, Huntly, and they of course had the market. North of Auckland there was nothing going anyway so it was useless building a brickworks up there so Albert set his four sons up in business and he was their financial guarantee backer. At that stage Gordon Crum (Ian's father) who was working for the amalgamation was asked to join the union and refused. He refused and was dismissed. Because the Clarks were very keen on the unionism he was dismissed, but in reality he was dismissed so he could go down to Portage Road, Great North Road corner and start a new brickworks.

Gordon built, he is in charge of the clearing of the land, of the early building of the brickworks, of setting up the first kilns. Number One kiln down draft and building of a Hoffman. During this time the other brothers (Colin, Harry, and Jack) came in. But in the first years they had nothing to do with the works except they all worked late at night and over weekends in the construction of it. When the works opened and produced their first ware Gordon was General Manager of the firm and Director, the other brother were Directors but they weren't all in when the firm started in the actual running of the firm.

Jack Crum was one of the brothers. Jack at the stage I think was the manager for the New Zealand Brick that his father had sold. He was factory manager running that. I believe later on he left there, I'm not sure, and went farming. But the depression hit and Jack, Colin and Harry all came in. Colin was also a clay worker and Harry who had infantile paralysis couldn't work in the brickworks and he was working for one of the local councils in the office. Anyway the brothers got together and they built the works up and Jack is mainly recognised because he was the horse trader in the family, and so he had a lot to do in the publicity and things around the family. But Jack did not spend much time in the factory.

What was the official name of Crum Potteries on the corner of Portage and Great North Road?

That was the one set up, and the only share holders were the four sons of Albert and that was Crum Brick, Tile and Pottery Company Limited.

Can you take me through the general process of making salt glazed ware at Crum Potteries.

Well the first thing of course you need the plant to manufacture stuff and you need the clay to go through the plant. The plant of course is mixing, winning, selecting of the clays, mixing. Then extruding, we always used the extruding process, drying, fettling, setting into a kiln. So we had to have kilns.

Willian Speer salt glazed urn
A lidded urn made by William Speer from New Zealand Brick (New Lynn) clay.
circa. 1921-22
Private Collection
H. 200mm
(TC)

Firing of the kilns. Cooling of the kilns, and then we call dragging or emptying of the kilns. And then of course ware went outside for grading and sales. So that's the process right through.

Now where did the clay come from? The clay for Crum Brick and Tile came from what is now known as Crum Park in Titirangi. That was a mixture of halloysite clay but it was a mixture of oxidised and un-oxidised clays, fairly high in silica which means they had to be fired to a high temperature. The silica was a cristobalite silica which means it had to be higher firing. Being the type of clay it was, it needed a lot of water to make it plastic. To extrude it we needed water of around about by dry weight of the clay about thirty two percent water added to make it plastic for flow purposes. Other clays around are kaolinites and they only need something like twenty - twenty two percent. So the clays at Crum Brick and Tile had all this water in them. When they were extruded and then they're set to dry they had a very high shrinkage rate. This was alright for us because when we fired the clay it had used up most of its movement and shrinkage and in firing and didn't shrink very much. So we could take it to high temperatures safely and fire it and we had very little loss in the kilns. Any losses we have would be on the way we mixed the clay or in the drying.

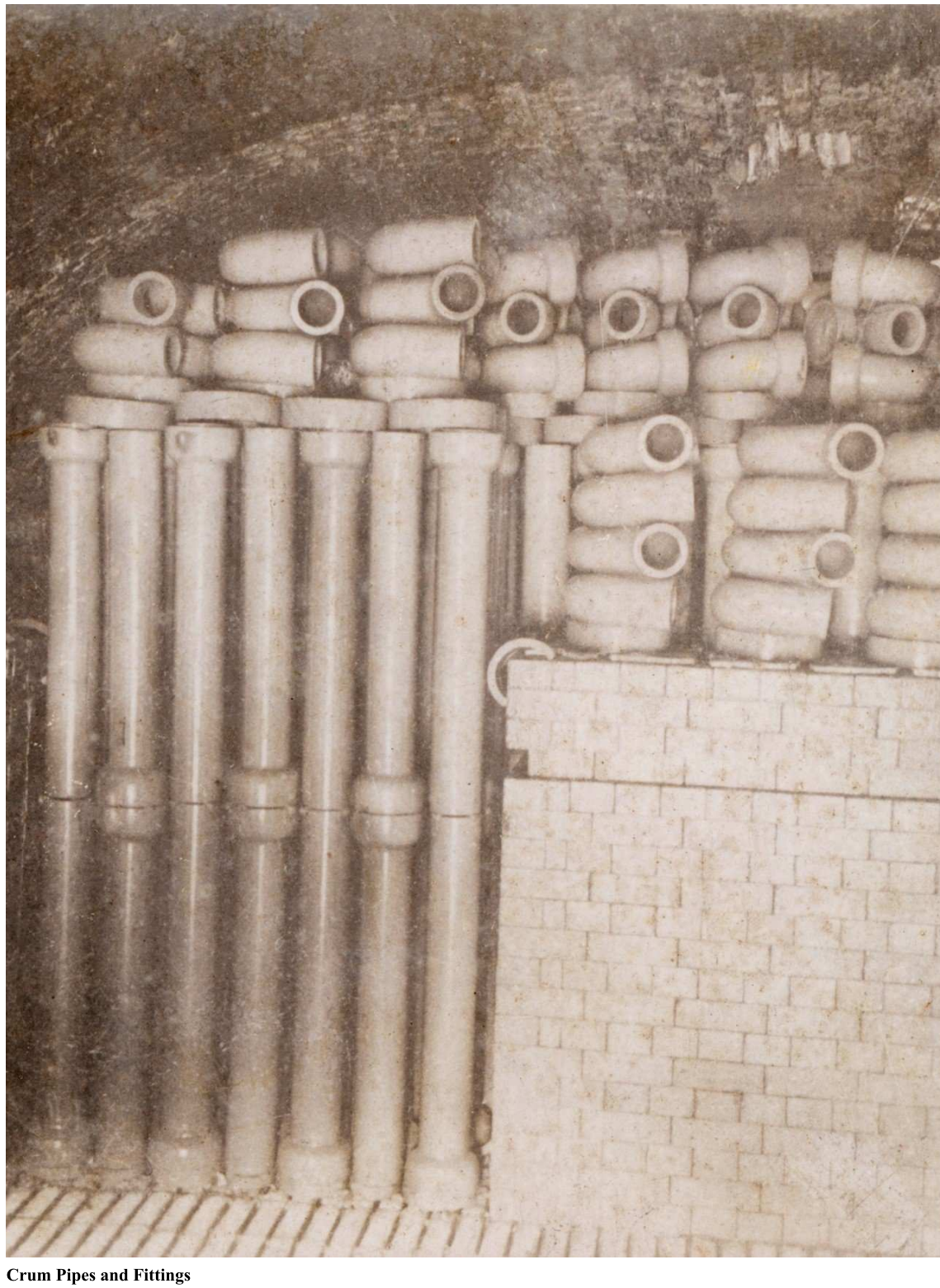
We had many ways of drying the clay. To start off with when we're talking about glazed ware that is pipes, sewage pipes, we made very few glazed bricks. Only one or two sets went out. The pipes were mainly four inch sewer pipes in diameter, six inch, nine inch and then later on twelve inch. The pipes were all two foot in length at this stage. Being two foot in length, if we'd made them longer they would have warped more in the drying but at two foot we could control it very accurately. They were dried on a floor that was one story up from our concrete base, and the floor had ten inch wide planks with a two inch gap so that the floor was slotted, and when the pipes were first produced they were put spigot down on the planks and then when they had set and proved themselves then they were turned over and put flange down across the gap. Then each pipe became a chimney and that induced draft to go up through the pipe and it really dried the pipe from the inside out again stopping warpage.

Now type of kilns: We had the Hoffmann continuous kiln that was mainly used for burning bricks, field tiles or agriculture pipes as some people call them, flower pots and such like. Conduits, they were bisque fired, they weren't glazed. The glaze kilns were rectangular down draught kilns, coal fired. The coal we used came mainly from the Denniston mine down in the South Island, West Coast. Local coals, Waikato coals had a thermal value of around about a thousand BTU a pound. Where as the South Island coals at that stage the hottest in the world, they had a value of one thousand three hundred and forty to one thousand three hundred and sixty BTU's per pound. They were coking coals so that means they formed coke. They were low in ash so we didn't have ash blowing up into our glazed ware, where as with the Waikato coals they were non coking, high ash, and they just weren't suitable, they couldn't take our ware. We went up to twelve hundred and twenty to twelve hundred and forty degrees centigrade.

How long would it take to produce glazed ware from the raw clay to finished product?

The raw clay would be dug, brought in and mixed and be stockpiled for three of four days to allow the water to move evenly through it. You know it was a few barrows of clay and so many buckets of water going through a mixer, and you had varying results but then it was all banked up. In later years of course we used front end loaders and more sophisticated mixers but clay was always mixed and allowed to settle for a day or two days. Then the clay was then moved into a hopper. This was done on a canvas belt type system which took the clay from mixing level up and then dropped it into a hopper that was nine foot high. The clay was plastic, it was ready to use. It went into the hopper and was left there for another day. Now the hopper had slopping floors, V shaped floor and that had a gap in it of around about ten inches again, and underneath that was another belt that then took the clay to the extrusion machines.

The hopper was worked by a man with a shovel and a pick. He just dragged the clay down into the belt. He could work faster than the machine could extrude it so he had a very hard job. He would be putting something like



Crum Pipes and Fittings
Inside one of the Crum salt kilns showing the layout and stacking of pipes and fittings. Note the bittens and kiln rings.
(ICA)

forty tons of clay through in a day but it was all down hill work. When he exposed a bit of steel that had had clay on it, we had dry clay dust which we threw on it and then that means the next lot of clay that came down didn't have a sticky surface but a smooth sanded surface so the clay didn't stick and just moved on.

From there the clay went into an extruder. The extruder was a simple extruder that had a die on the front and extruded a column of clay the height of a brick and the width of a brick. This came out then if we're making bricks it was chopped into the three inch brick slabs. If it was going to feed the pipe machine it was automatically cut into thirty two pound weights, that was virtually three bricks. These slabs were put onto a wooden wheelbarrow. The wooden wheelbarrow had thirteen slabs on it which gave a total weight somewhere around about three hundred weight, and this was the normal work wheeling three hundred weight from the extruding machine to a car that was winched up to the pipe floor. The clay then went up to the pipe floor, it took two barrow loads on each car and there it was then taken off that car, put around the pipe machine and then the car went down and got the next load up.

In the meantime the pipe machine of course was working using maybe half of the clay as it came up but the other lot was stockpiled around the machine and covered. The extruder, it was a mincer and pushed the clay, this is in the pipe machine, pushed it through a grating into the chamber and then it was horizontal and then we had a vertical shaft going down again with the augers on it and our pipe machine down below, and it extruded the pipes flange first downwards, not on a level. Now the chamber up top was hooked up to a vacuum pump so as the clay came through all the air was taken out. We worked within one inch of complete vacuum. Complete vacuum is about thirty one inches of mercury. We were working around twenty nine and a half to thirty and a quarter all the time. So there was very little air left in it. This immediately turned the clay into very plastic clay, and that suited our dies.

With studio pottery you have kiln furniture that's reasonably standard, what system was available for an industrial kiln?

That's an industrial kiln (picture shown) and you can see these four inch pipes, two foot long. They're stacked three high and then on top all odd shapes. These are fittings. Now you'll see down here that the pipes are sitting on little rings. The floor you can see has slots in it. That was dusted with a clay that would not take glaze, clay powder, then on top of that there were strips of clay cut to run along, soft clay. On the clay, the ring was put down, then on the ring there were four little bittens of clay put around. With those you could put the pipe on and set it plum. And then here there's little bittens, (between the layers of pipes) there see that ones set spigot to spigot. So those, you could set that one on top of that one right. So you did this head and tail. They all went on those rings but when you came spigot to spigot, here was flange to flange.

So these little bittens, there were two men in the kiln, their job was to put these little bits of clay on as the setters were setting the pipes. When they get up to the top (of the pipes) then they have these rings put on again and then on them they have larger rings which were nine inch or twelve inch. Well they went right across and they tied the whole lot together at the top. So they were tied on the floor by being stuck to the floor and they were tied on top with these rings, and then on those rings there were other rings set just to lock the whole thing together.

So they were tied together just by the weight?

By the weight, and there were soft bits of clay remember between them and the dried pipe. And then on top of that you can see our fittings. These are gully fittings, they go through. They would have a four inch ring put in the top again and then there's your tie course going across and then on top of that is another lot.

Loading Field Tiles
Crum Brick, Tile and Pottery Co. Ltd.
(ICA)

A little bit like the Olympic rings?

Yeah they went in and they were done like the Olympic rings. You had one row right across and then the next row was in between the two rings. So they were like the five rings of the Olympics, they sat into each other.

What type of clay were the rings made from?

That could be pipe clay or it could be common clay, it was mainly pipe clay because it was made out of the pipe machine and we didn't want to have to clean the machine if we put common clay through it. Some of the furniture we used was made out of common clay.

There must have been many bittens made, what happened to them?

When the kiln was dragged of course all these little bits of fired clay were on the floor and that was picked up and that was crushed for brick chip.

The rings were quite an important set up of the kiln?

Yes. It used a lot of clay, and the thing with the rings is they were no use once they were glazed. They went out and were turned into chip or fill or something. You couldn't recycle them (in the kiln) because of the glaze.

Can you tell me about the glaze test rings you used in the kiln?

When you're salting, normally a down draft kiln is salted every half hour when its reached temperature, maybe twenty minutes - half an hour. We used to put on between six to eight salts firing our big kilns. So after you've put four salts on you had a whole series of these things (test rings) standing on a brick and you would reach in with a steel rod and pick it up and then look and see how thick the salt was on it. That was testing the salt, and you'd also look underneath, you'd look for the penetration coming in. So that gave you a very good idea how thick your salt was and how it was penetrating.

We had these at the top, but we also had them on the floor, a brick height off the floor, and we had to keep the top alright but make sure everything on the floor was salted. So you were working your kiln pressures. We called them rings. There would be half a dozen or more on the top and the top was two pipes high, that was where we set the rings. We had a channel going in and we set the rings on a brick that high but it was only a yard inside the wicket. You could reach them quite easy.

That would give you a good indication?

That told you exactly because this is made out of the clay the pipes are made out of, and it's in the wicket. You had to go in at least a yard. If you're too close to the wall it was colder than, you know the walls absorbed heat so you had to go into a reasonable area, and you soon learnt what was a good ring.

How did you manage the temperature difference between the top and bottom of the kiln?

It's all to do with firing and there's a lot into firing. You know you just don't light a fire and shove coal on. You've got to bring the stuff up at the right gradient when your salting. You've got to have a lot of air going through to bring the salt down. If you're firing in to an area that is pressurised well the gases and that won't go so when you're firing here you've got pretty much full draft and that's taking the air in over the fires and the salt and bringing them down.

Previous page: **Crum four inch pipes**
on the drying floor. Note the slots in the floor.
1952
(ICA)

Extruding Pipes
Patrick Motley (left) and Ted Lord (right) at
Crum Brick, Tile and Pottery Co. Ltd.
working with extruded pipe sections.
(ICA)

That might explain a question I've always wondered about. Salt glazed pots made by studio potters are never salt glazed on the inside and yet the pipes are.

The hot air, the fumes are coming down and there's nothing to induce them to go into the pot. There's hot air in the pot keeping them away.

And because the pipes are hollow?

They're chimneys. See, they're forming chimneys again, there over these slots (in the kiln floor). These things here, the traps and odd shapes, you'll quite often see a trap on the bottom outside and sometimes on the inside you'll see there won't be any glaze at the bottom invert of it. But you'll see from both ends in the top when you look in they look good but if you know what you're looking for.

Other than glazed sanitary ware what other things did Crum make?

Ok, of course we made bricks, we made field tiles, we made flower pots, we made Crum modelling clay and stoneware clay, and in the seventies, late sixties and seventies most of the potters used that clay. We made the stoneware clay. A bloke by the name of Stichbury (Peter Stichbury) came out and he gave us a rough formula, a good formula and it was so much of this and so much of that and we produced our first trial of that and then I modified it slightly from Peter's stuff using the same four basic things. The main clay of course was our pipe clay, that was the body but then we added other stuff to it.

The pipe clay came from Crum Park?

No in that time it came from Glen Eden. We had a clay pit there. Crum Park closed about 1962. We later had another clay pit which we opened out at Sabulite Road in Glen Eden just down river from the cemetery. The water flowing through that came from the cemetery and had the best fresh water clays you could get. So Peter gave us the basic thing with this.

So those were his requirements and he came to you and said can you make this?

I don't know how it came. He came into us, and it could have been. We didn't go out looking for that. You know this was quite good because it was our ordinary pipe clay and we had no trouble. And this one, to make that all, the clay was turned into a powder. So to make that I had to dry and then crush and sieve my pipe clay down to a flour or a little bit courser than flour you know say salt size, and then we mixed so many bags of this and so many bags of that and put them into a big feeder and they were thoroughly mixed and then another layer went on and another layer went on and this big feeder, and we had paddles coming down and that scraped the full face so it didn't matter if each layer was a little bit different. We got a full face mix. I would make something like twenty - twenty five ton three times a year.

Other things we got into. The kilns used to be fired by shovel. It was a number three shovel that would hold ten pound, square mouthed. We then got on to feeding the kilns mechanically. Now when you're putting coal in, half hour feeds, the coal, ten pound and you put four to six shovels in a feed. Go away, half an hour you come back. Our kilns, we had sixteen holes, had one with eight holes, a couple with sixteen holes and another one with twenty fire holes. So when you think twenty times sixty pound, a man was shovelling that every half hour.

So that's a lot of hard work?

That's a lot of hard work and it's hot because there's a lot of heat coming back out. You couldn't stand in front of the thing, you had to work from the side. What happened of course is when you put that coal in you couldn't

Pipe making at Crum
Pipe making at Crum Brick, Tile and Pottery Co. Ltd.
Tom Simon lifting off a pipe.
August 1957
(ICA)

get air around it. Enough air around it to burn it so it wasn't producing smoke. You put the coal in and then the air would come up the face of it all the time. Some of the coals sitting on the other coals. It was burning and it produced heavy smoke, and so we're now talking about pollution.

We developed a method of where we could feed it in continually just a little bit at a time and we cut down from virtually a ton a fire hole to, it was seven down to four and a half. We cut the usage of coal down because we could feed it and we could burn more efficiently because we had sufficient air supplied through it. It wasn't producing smoke. We didn't produce anything when we were firing in the end except when we salted, and mainly salting was done at night so people couldn't see the white fumes. It wasn't deliberately worked out that way but it just happily worked out that way. And also the salt, the sodium comes out and the HCl, the Cl goes up, mixes with water vapour, and hydrochloric acid.

Was anyone ever concerned about that at all?

No, because it was an accepted thing. You know you walk past the tannery and it used to stink. Tom Clark, when he built his first tunnel kiln to burn bricks, he burnt it on oil and the oil would come out and the women complained because it attacked their stockings. But you know, that's what life. We hadn't got into the, there was no air thing until 1956 where we had to look at the Clean Air Act, and that's what started us off on that, and then later on just after 1970 they put a gas pipe in. Natural gas came through, and it came through from Avondale to the beginning of Clark Street - Portage Road.

We connected up and it cost us just over twenty thousand dollars to put a pipe from that down to our works corner of Portage Road - Great North Road. That was a lot of money in the 70's. But we put that in and our costs again went straight down, and because we put it in we sort of loaned that money to the gas company and we got gas very cheap. They worked out it would take us five years to pay it off. But they compared it to stoker fired coal costs. We paid it off in two and three quarter years. So we had two and a quarter years of very cheap gas and then we had to go up to the normal rate.

So the kilns were originally coal fired but in the 70's you moved to gas?

Yes and they were using the Denniston coal or West Coast coal. We had a problem down there at one stage and couldn't get coal up and we had to go into using the Waikato stuff and we couldn't burn our kilns. Didn't have enough heat value in it. Then we were doing all sorts of things, putting sawdust through with the coal, adding oil.

And did that work?

It did but we weren't happy with the quality we made and we kept on making our bricks and that, it didn't affect them. But we weren't happy with the quality we were making and we cut down production a bit. And it was everyone, I think it was Ceramco at that stage, Clark's in Avondale - Blockhouse Bay, Clark's Potteries. We all used to share, we would get five hundred ton up once every four to six weeks, a hopper in a boat would come up, and then we shared that coal around.

Between the different potteries?

Yeah we all used the same coal. So we were worst of enemies but best of mates and if one ran out and the other one had plenty, a few truck loads would go down, it was sharing. Well this is the clay trade and clay workers are clay workers and you have sales arguments and things but you've got a basic comradeship for each other. It's not there now but you know it was all the old, the Ocklestons, the Clarks, the Crums, there were a whole lot of them. We were just clay workers. We weren't different. And still the friendship is in the families now. Its just the way it goes.

Laying six inch pipes
Six inch wide drain pipe sections being laid.
Four inch bend at top left. Location unknown.
1960
(ICA)

There is a lot of variation in the colour of salt glazed pipes and ware, why was this?

This is when I first started experimenting with under feed stoking (pot shown) and the idea was to get rid of ash, ash was a big problem a lot of times and if you've got ash, dark ash, it means you're not firing efficiently. So here is one of my early ones and that's got a bit of ash blown through it, but you can see it's a light creamy glaze.

So the colouring is from the ash?

That is from fly ash, that's just the secondary air coming through picking up ash and carrying it on to your pots or your ware.

So that's a reddish brown colour?

Yeah that was the ash just coming off and also it shows a little bit of reduction. That's not enough air to burn the fuel properly.

So the colour of the inside of the pipe is quite different to the outside. The outside is a pale colour where as the inside is a tiger speckle.

Yeah well again that's oxidation or reduction. There's a flow of clean air over that.

So this was made at the factory? (Looking at a large salt glazed vase)

That was made out of a twelve inch flower pot that was put on a wheel and thrown and then used my loop.

And you had a wheel there?

We had a wheel, it was a top class wheel. In the old days when they made pipes they couldn't make a flange, they couldn't get the clay to flow, they didn't have vacuum de-airing so they just made a barrel, then they had a potters wheel and it had a piece of kauri coming up, round, and that was just a little bit smaller than the inside diameter of the pipe, and it was covered in canvas, and it was wet down, and then the pipe was put on, and then we had a man on the wheel. He'd get the pipe, throw it out, bring it up, you had a flange. He was called a flanger and he was the highest paid man in the works. He threw a flange!

What were the kiln drops called on pipes and other salt glazed ware?

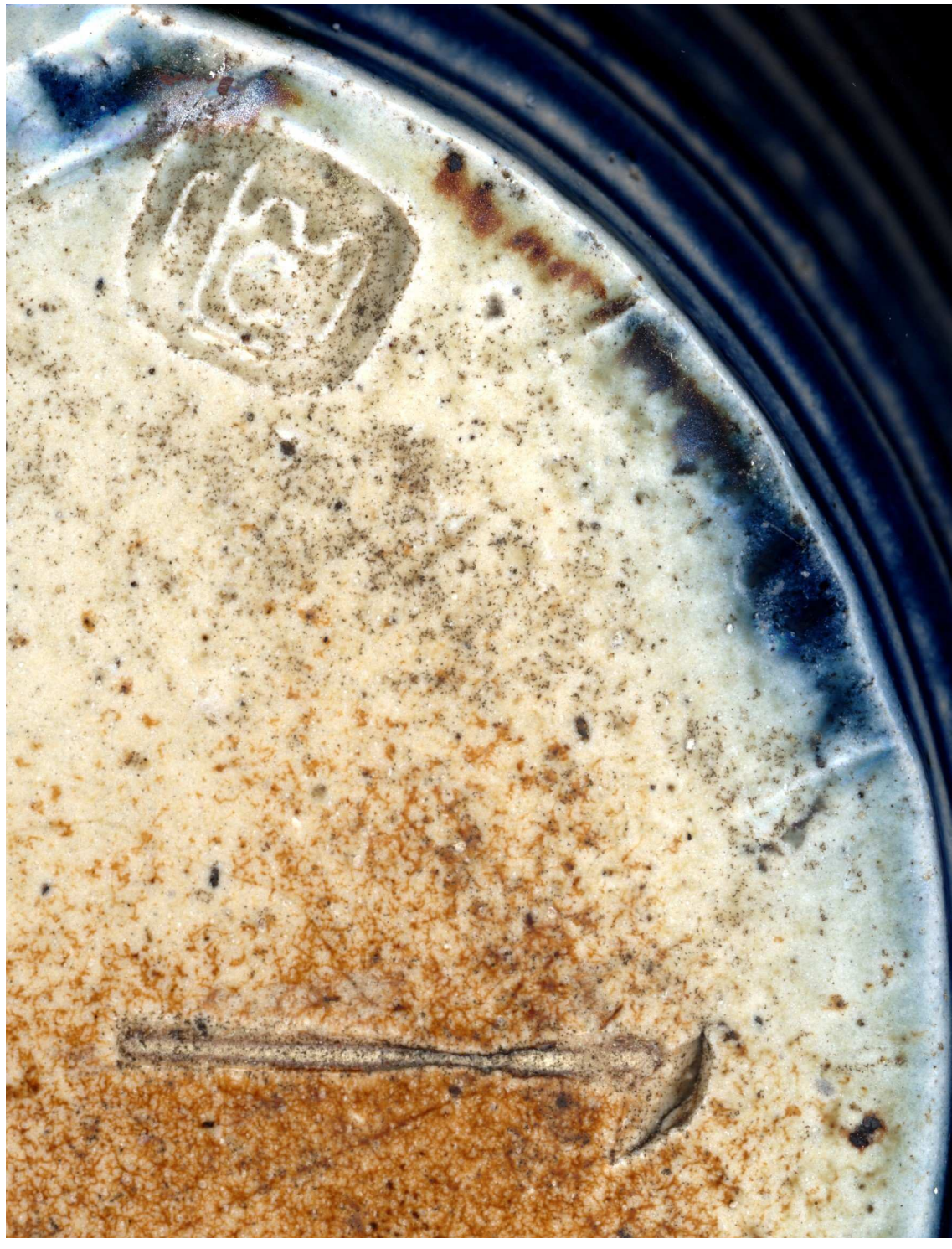
Just a drop, no we didn't call them anything, we weren't worried about them.

What about the thin marks on the bases of some pots, like stilt marks. Tell me about those. (Marks also seen on Castle and Stichbury pots fired at Crum)

They were to get a glaze underneath, so that sat on something and I just had little thin bits holding it up.

They were made just with your fingers?

Yes, and dried and they were fired as well before I put them, before I set this (the pot).



Base of a Len Castle salt glazed vase
Fired at Crum showing a kiln stilt mark, a feature of these early pots. The potters' mark featured of a crenellated design was suggested by Stichbury to Castle.
circa 1950
H. 70mm
(TC)

Patrick Motley, who was a fettler at Crum (according to the book Cone 10 Down by Moyra Elliot and Damian Skinner) is said to have suggested to Len Castle that he could fire some of his pots in the salt kiln. What's the story behind this?

Pat Motley was in charge when I took the first stuff for Len through (Len Castle). Pat was in charge of our pipe making floor. We never had a fettler. A fettler is someone that trims stuff, but he was actually our foreman in charge of the pipe floor, and when you extrude a pipe, you have a little bit of clay inside the flange because you've got two dies coming together and you get just a little bit of clay coming through. When you release the table so it could extrude down a little bit of clay shot in, and we used to with a bit of kauri, go like that (run the kauri around the inner diameter of the flange). That's where the word fettler might have come from but we never called it that. We called it a trimmer.

He was a foreman, but he was a working foreman. He was a gang leader, that might be better. A very good guy. And he would get to know Len, because when I would take stuff from Mount Albert Grammar in to be fired into our kiln. Then that was taken out of the kiln and put up in Pat's. He looked after it. You know you couldn't leave it lying around. So it went up into a locked area on his pipe floor, and then Len at times would come in himself to pick it up in a car. Len used to make platters like this (wide platters) and you imagine me on my push bike riding from Mount Albert to New Lynn with this on the back of my bike. So Len did it and Pat was his go between in our factory.

Ian Crum talking to Tim Caulton, Auckland, May 2012

Len Castle throwing a pot
The pot has been cut in half to examine the wall thickness.
circa 1952-1954
(AP)

An interview with Peter Stichbury

The following interview was recorded on the 16th August 2012 by Tim Caulton

Your time at teachers college. How did you get into that programme?

After the war, we were all very mixed up. Two brothers overseas so I left Grammar early and worked in an office, and worked on the wharf with the New Zealand Express Company for a while, couple of years probably. And then as a storeman. When I had enough of that I decided to go to night school in July to get my School Certificate but I didn't! I missed in French which was one of my better subjects. Then I did another year of study and finally I went to teachers college. It was in between bits and pieces and then into the army after a term. And then when the war finished I was seconded by the pay office of the army to complete soldiers' histories and the amount of pay they should get on returning from the war. Then I went to night school again and got my certificate and went to teachers college.

Is this at Epsom?

Yes, and from there I got a third year in art and so did a two year stint in moving around schools. Then applied for Ardmore Teachers' College and was given a position as an assistant lecturer in Art. Then when we were just married I applied for a scholarship to go overseas for two years and won it. Diane and I went away a year after we were married and went to Leach Pottery for seven months and then did a tour of the Continent visiting potters. Then we flew to Nigeria to work with Michael Cardew, famous potter. We were there for nine months then back home and I was awarded a full lectureship almost as soon as I got back so we stayed at Ardmore until the end of 1969. And by that time Ardmore was to close in a few years so I went potting full time and haven't regretted it ever since. Its been fantastic.

So what was it like there at the teachers college?

Oh great! Very creative. We had some very good lectures, a chap Shaw, who was an Englishman and lectured in English Grammar, Poetry etc. He was wonderful. And I was able to throw a few pots. I've got a photograph of the pottery and that was run by Hilary Clarke. So I joined in that stuff and threw my first pot there. And I met up with Len Castle later on. He got it fired at Crum. And then I started making a few pots and getting them done at Crum which they thought was pretty good. The Head of Department - Phil Barclay - wonderful person - very creative.

Is there a story behind that very first pot?

Hilary Clarke and I built this little kiln and fired this one pot in it, to bisque stage. And then I took it back to Crum and had it fired in the Crum kiln.

So you would have used a gas burner to bisque it?

No, wood.

Wood! A small one pot wood kiln?

Yes.

Peter Stichbury bottle
Second thrown pot fired at Crum Brick, Tile and Pottery Co. Ltd.
1950
H. 170mm
(TC)

Was that the normal thing to do back then?

No.

Was anybody else doing that?

No. Not that I can recall. It was the start of something to me anyway. Then I found that I was very good at throwing. So I went on to that rather than paint or sculpt or whatever. Never looked back!

Lets talk a little bit about how you were able to get your pots into the Crum kilns. How was it organised?

Len Castle at that stage was taking pots to Crum and I was at night school with Robert Field at Avondale College and Len used to pop in occasionally and he offered to put the first pot I made into the kiln, so that was great. That was the start and then I used to go out and buy Crum clay in blocks for the pottery at Ardmore. I used to pick up Diane from kindergarten and we'd both go out, pop a pot or two into the hands of the foreman there and he'd be quite happy to put them up in amongst the pipes for us.

I think the foreman there at the time was Pat Motley?

I think there were two in my period, and they were all making these "bends" etc by hand in the first stage but then they got moulds and could whip them through without problem. They'd really moved along in terms of manufacturing, and it was a fascinating place you know you could go and watch them firing it.

What was it like knowing your pot was being fired in a large industrial kiln?

Very exciting.

It's not something that will ever happen now.

No. No. Then came a time when pollution was a big thing.

Is there any more you can say about how you got the pots into the kiln? Who would you talk to to organise that? Would you take them there by car?

We took them there by car. I had a little Morris 8 at the time and we just used to roll up, put them in an old small tin shed. Have you ever heard of that?

No.

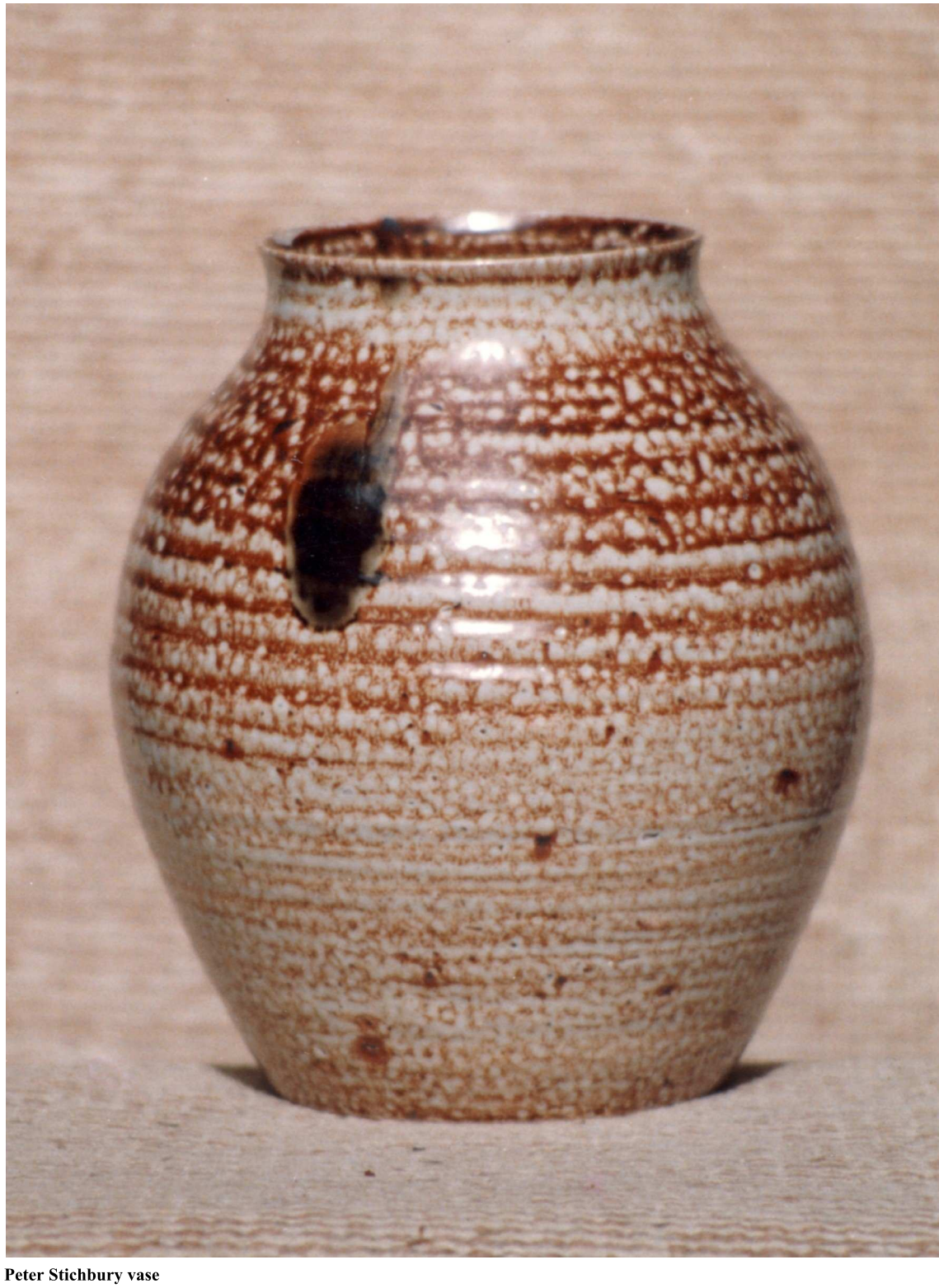
It was just a thing about three foot by three foot, with a few sacks in there. We just used to put the pots in there and put a sack over them.

Now the pots were not fired at that time they were just dried clay?

Yes.

Did they have things like experimental slips on them at all?

Later on they did.



Peter Stichbury vase
Thrown at Ardmore, fired at Crum Brick,
Tile and Pottery Co. Ltd.
circa 1955
H. 220mm
(PS)

But the very first ones?

No, just that. (pointing to second pot)

Was there a reason for that?

Well I wasn't up to that. As I got time at Ardmore to play around a bit, I tried different slips. And Len used to put an iron slip on his which came out a beautiful colour. So I tried manganese.

Where would you get your manganese from?

Just a purchase. There was a man at Amalgamated Brick, he used to supply material to potters. McClure. Have you heard of McClure?

No.

He started up a little company on his own, but I think he was a chemist at Amalgamated Brick.

When you were at the Crum kilns you must have seen all the different colours and glazes on the pipes and fittings. What did you think about all of that variety?

Fantastic! It was all just the one clay though, but depends on the quality of the salt (glaze) I think. Fantastic. And the way they used to stack them together with a little sandy clay. A ring of it. A next one and a next one. Fantastic.

And you would see a pipe perhaps that was one colour on the inside and a completely different colour on the outside. In the very early stages did you know what that was caused by?

No, you go along and learn things and read Leach's book and others.

So it was a very pioneering sort of thing?

Absolutely.

Did you know about other potters that were getting pots fired in those kilns at the time?
(Besides Len Castle)

I didn't have any contact with any potters that were doing that, except I used to take a few out for other potters, beginner potters.

Can you recall the names of any of those (potters)?

I'll have to think about that!

There seemed to be two main groups of potters learning in the late 1940s and 50s. One at Ardmore and the other at Avondale College. Did you know each other?

We got to know each other. I had to build up a pottery at Ardmore, they actually got to the stage where they built a separate wing for me. The Principle Mr. Thomas Wilson arranged all that.

Peter Stichbury vase
Fired at Crum Brick, Tile and Pottery Co. Ltd.
Manganese bands
circa early 1950's
H. 230mm
(PS)

Was there an exchange of knowledge about the salt glazing opportunities that Crum was offering?

No, I think we kept it to ourselves rather. We were a bit mean about it probably unless you had a friend who made a pot or two.

What would be the reason for that?

I think we didn't want Jack (Crum) to know. But he did I think.

Was Jack Crum the only person that you didn't want knowing about what was happening?

Well he was the only one I ever met and he came out and said "What are you doing here?" I said "Just collecting a pot. Dear Mr. Crum you are contributing to the Arts Society of New Zealand." He didn't want to know that.

Is there anything else you would like to say about keeping the knowledge of those pots fired in the kiln just to yourselves?

Well I think it was a wonderful period that we were able to do it. Whether we were a bit greedy in the first instance or not I'm not sure, but the foreman was very happy to put the pots in the kiln, and I don't think Crum suffered in terms of lack of income because of it.

I used to take my pottery students on a tour of the museums and the art galleries and Crum Brick. It would have been when I first started at Ardmore in 1950... what ever it was. '51 right through until the end of '69. It was exciting.

How many students would you have with you?

The first year I had four and it went up to twenty eight one year, depending on the interest of the students, whether they wanted to be a potter or what ever. From there I built big kilns and little kilns, fantastic.

Can you talk about the slips you used. For instance the first pots had no slips on them.

No. Just straight Crum (Crum pipe clay). Well as one got to know more about pottery and what slip was and how you could apply it, the qualities of it, and with wax resist patterns and all this sort of thing then you wanted to do that yourself, so you did. Some of the experiments were pretty poor but there was inevitably the time when you were pretty adept at it, so you carried on with it then, it was great.

So were there any failures of those early pots in the Crum kilns. You would put the pot in and it would come out nothing like you expected?

Can't recall anything that was drastic.

You saw all the pipes with all the drips on them, did you want that to happen to your own pieces?

Yes, this ones my best one (Peter points to a large salt glazed vase p.96). This is a West Coast sand and slip. I've never been able to throw that shape properly again. Leach talks about the constant curve.

Peter Stichbury coffee pot
Fired at Crum Brick, Tile and Pottery Co. Ltd.
Cobalt wash
circa 1950's
H. 235mm
(PS)

I've been told that height was an important feature of these early pots. The ability to throw a tall form. Was this the case with you?

Yes, throwing it properly in other words. That is the skill to get the right base thickness, not too thick there, and get that even right up, and I didn't have any trouble with that.

Were you influenced by anyone when making your Crum glazed pots?

I was very influenced by Cardew's work. I always used to open the Leach pottery book at Cardew's photographs because they had certain quality of substance and quality of primitiveness and just a quality about them that I loved.

How many pots do you think you would have fired in the Crum kilns?

Twenty or thirty probably, hard to tell.

So it wasn't a regular thing?

Casual.

Would you have to contact them or just turn up?

Just turn up.

And they would accept you?

Yes, the foreman would. Very nice man. Two different foreman I'm sure.

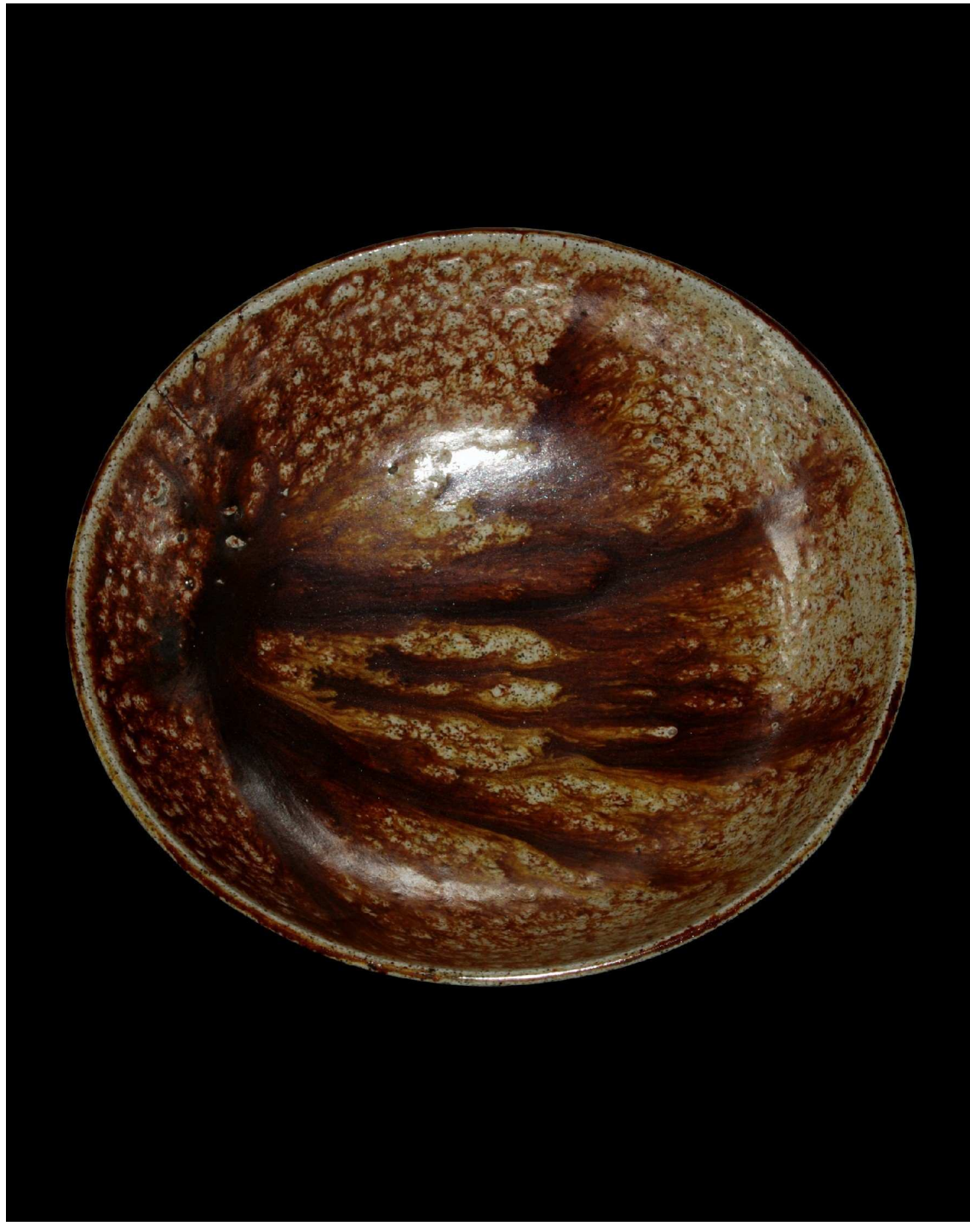
How significant do you think that early Crum era was for the studio pottery movement in New Zealand?

In terms of clay mostly I think. Usage of clay because I made up a body of just three different materials and gave it to anybody who wanted it and I think they sold a lot clay just for that. I used to get dry Crum (clay) and mix it in a blunger. My generosity!

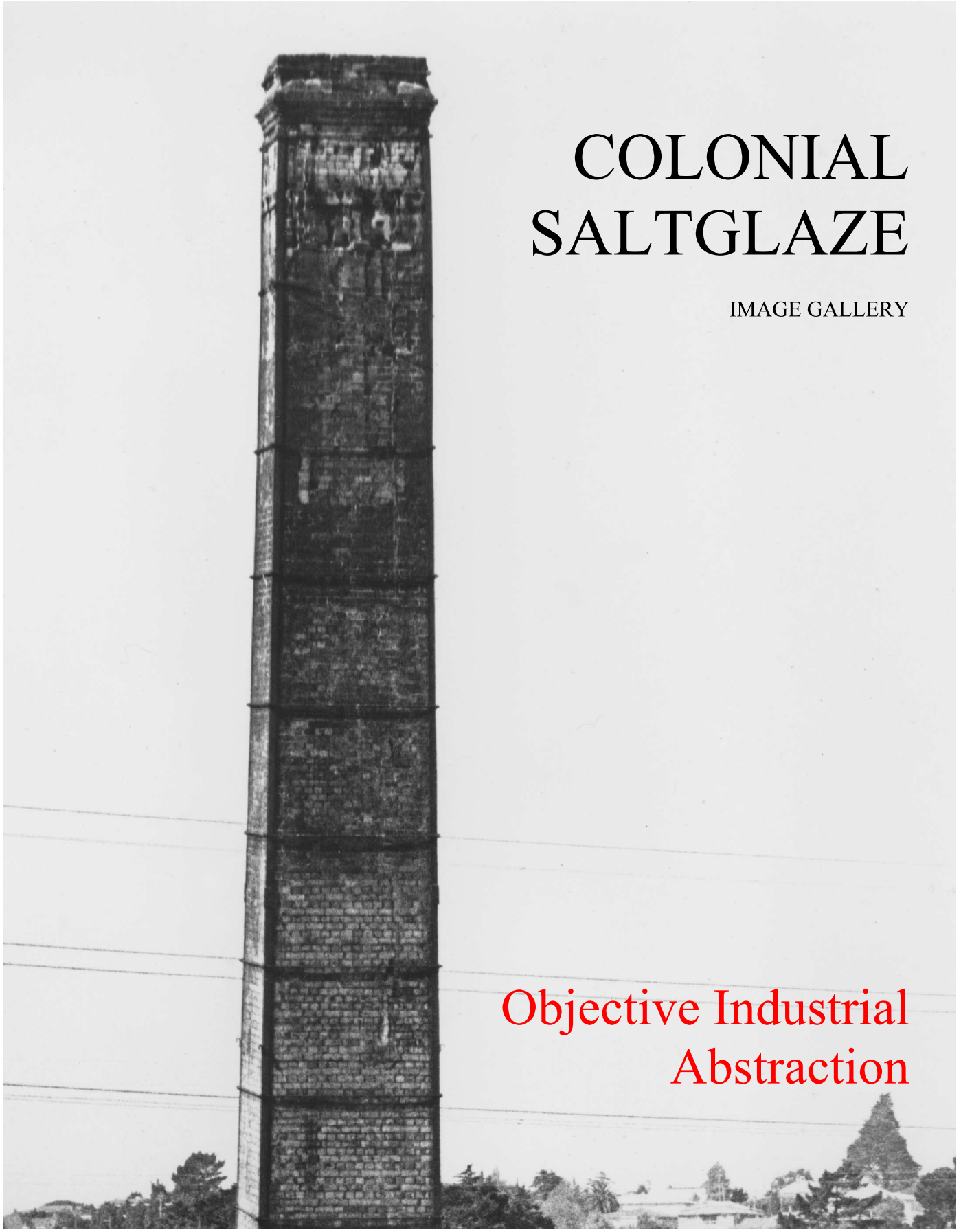
What happened to the pots you fired in the Crum kilns?

I sold quite a few, sold them through Brenner Associates, and there was a salt glazed pot, and I sold it to them at normal price and Westbrook (Dr Eric Westbrook - 1952-1955 - Director of Auckland Art Gallery, Toi o Tamaki) saw it, wanted it for the gallery and they charged him £800!! He was not impressed.

Peter Stichbury talking to Tim Caulton, Auckland, August 2012



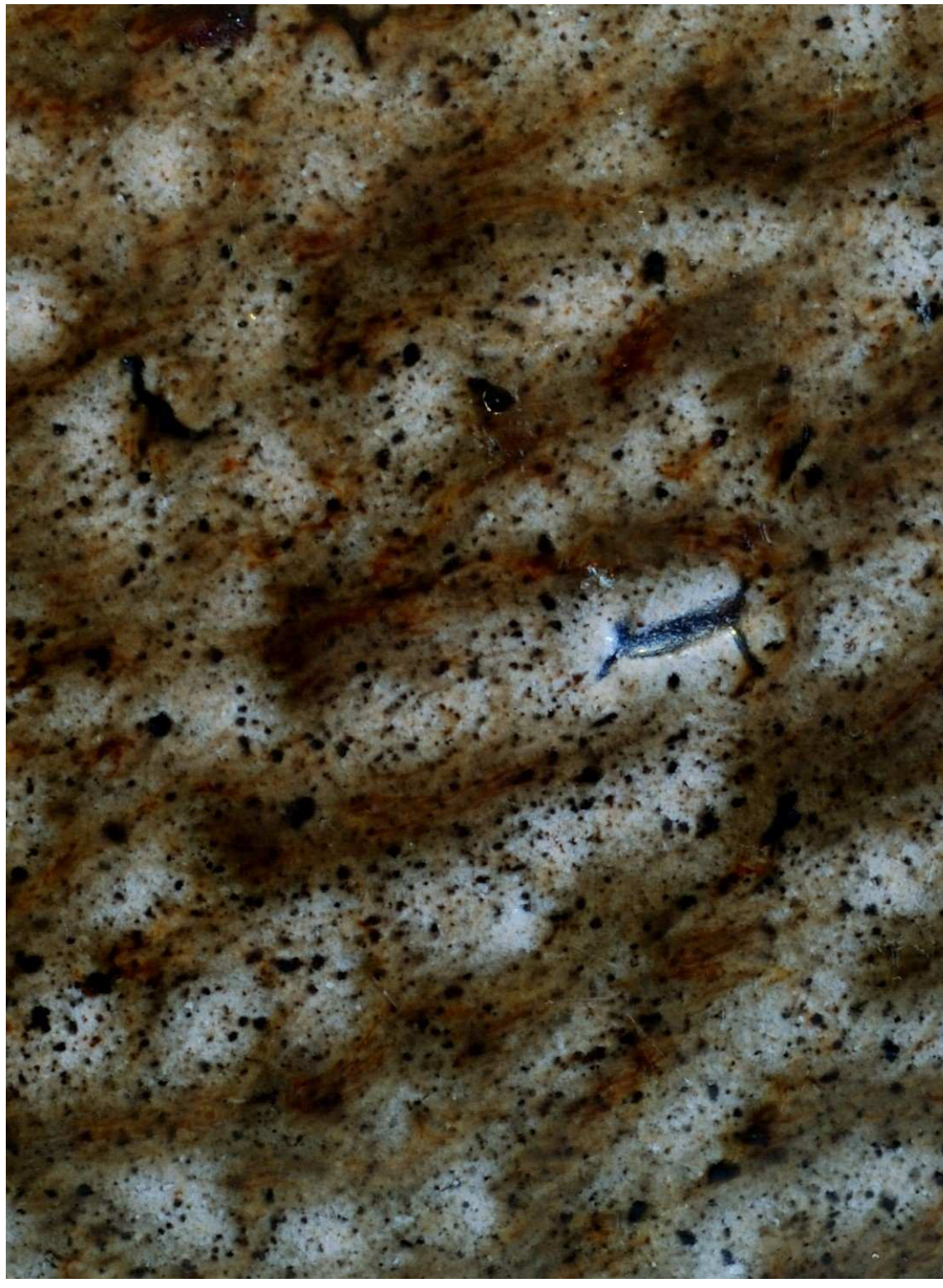
Peter Stichbury bowl
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa early 1950's
D. 205mm
(TC)



COLONIAL SALTGLAZE

IMAGE GALLERY

Objective Industrial Abstraction



Glaze detail
Salt glazed pipe fragment,
H. 25mm
(TC)

Len Castle salt glazed vase
Fired at Crum Brick, Tile and Pottery Co. Ltd.
1948
H. 270mm
(TC)

Base of vase opposite
One of just two known Castle pots signed in this way.
(TC)

Crum salt glazed bread crock
These crocks were moulded in two halves and the handles were applied afterwards. Lids were of turned Kauri made by Howard McDonald an industrial wood turner.
(TC)

Len Castle vases
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1952-54
(AP)

Salt glazed fragment
H. 40mm
(TC)

Len Castle vase
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1952-54
(AP)

Salt glazed kiln fragment
H. 50mm
(TC)

Len Castle salt glazed jug
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1952-54
(AP)

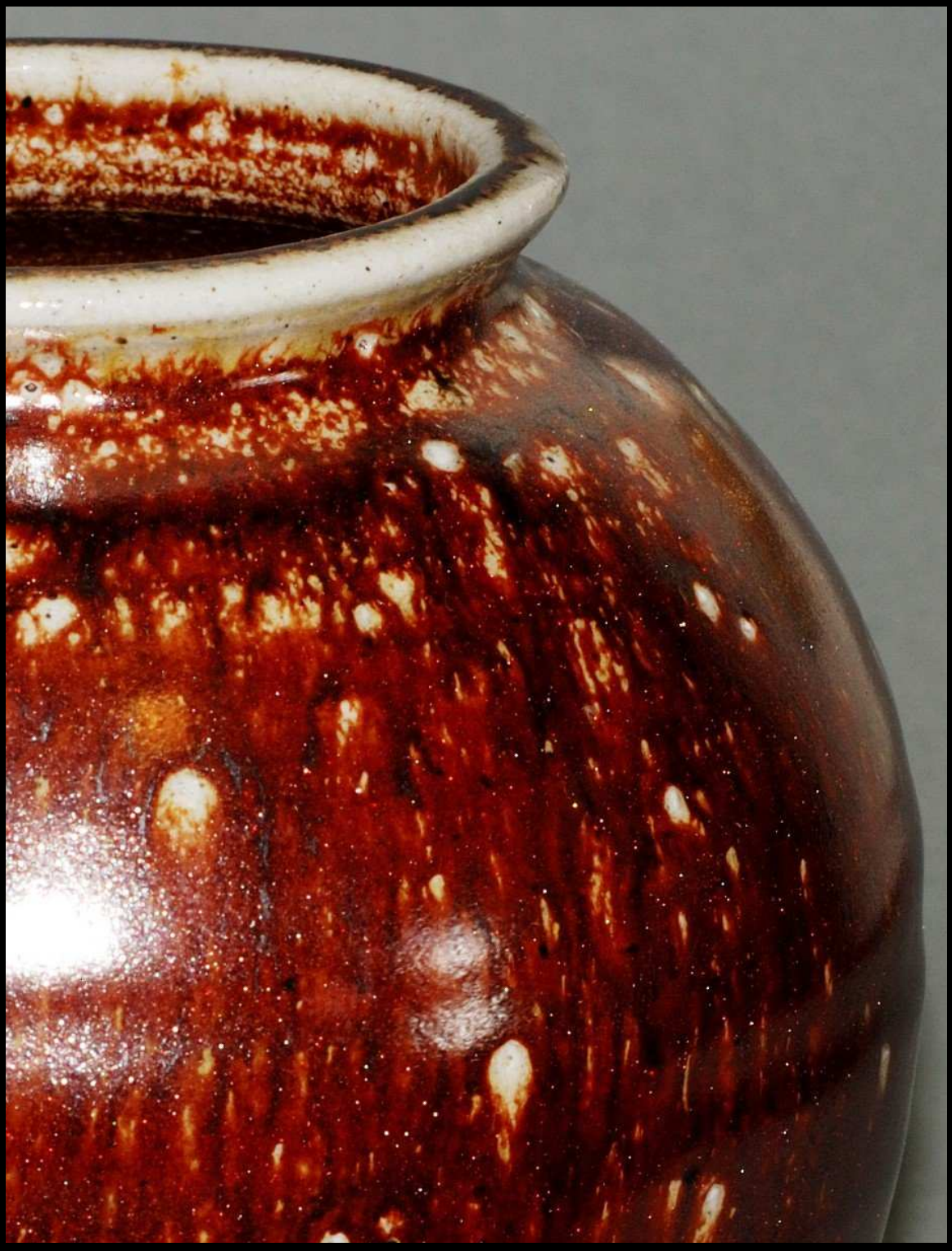
Detail of salt glazed droplets
H. 20mm
(TC)

Len Castle salt glazed kitchen pots
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1952-54
(AP)

Salt glazed grave flower holder
Underside of lid.
Possibly Crum or NZ Brick, Tile and Pottery Co. Ltd.
W. 190mm
(TC)

Len Castle salt glazed vase
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1950's
H. 270mm
(TC)

Crum pipe fragment
Salt glazed. The letter H is the individual makers mark, used for quality control.
H. 80mm
(TC)



Len Castle salt glazed vase
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1950's
H. 130mm
(TC)

Melted pyrometric cones
Formerly from the Richard Quinn collection.
Possibly New Zealand Brick, Tile and
Pottery Co. Ltd.
H. 90mm
(TC)

Pipe Stock in Yard. Sept. 30th, 1914.

First Quality.

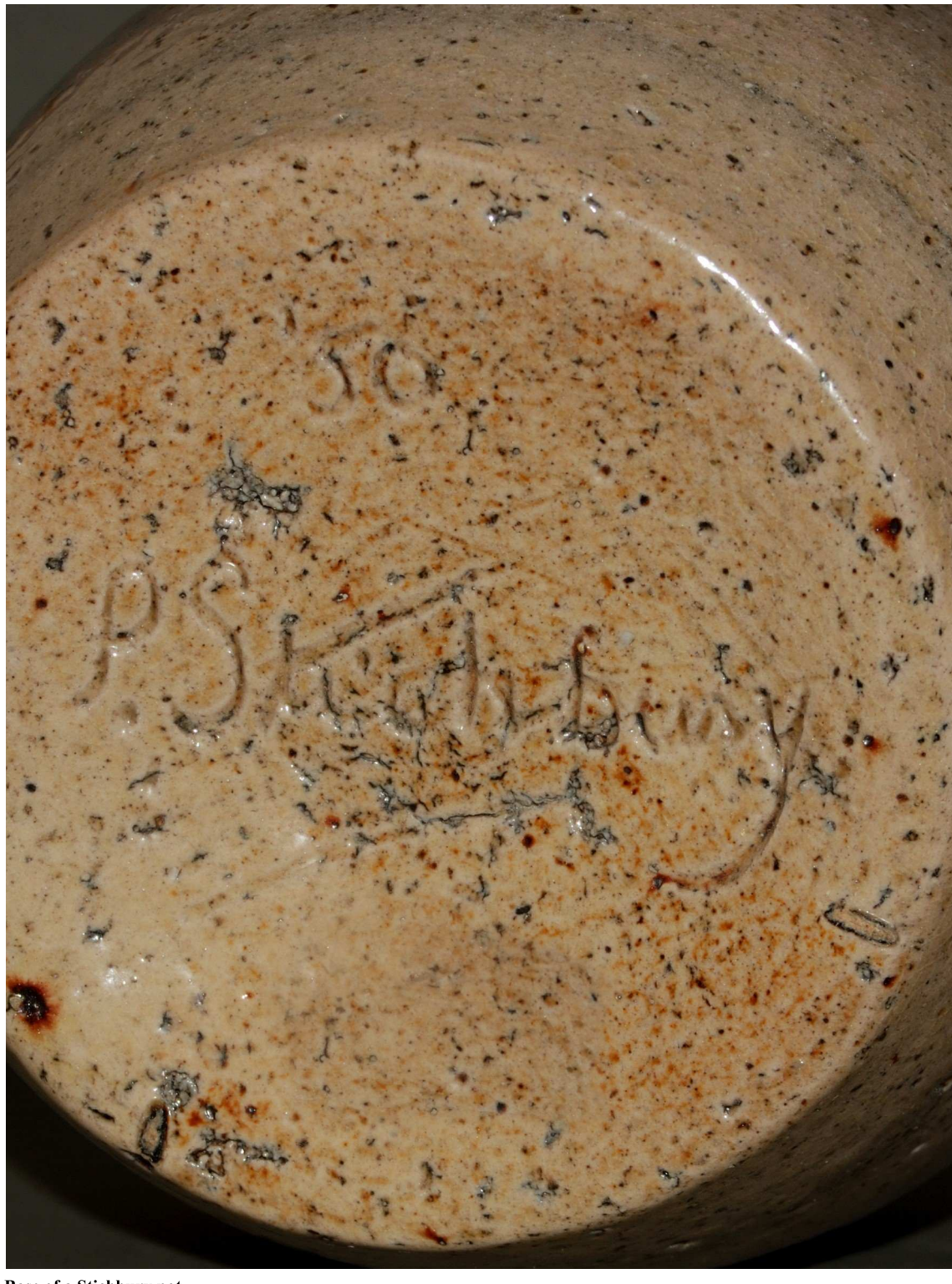
120 - 4"	Saddle Junctions	4/-	24	0	-
661 - 6"	Cesspits	6/6	214	16	6
21 - 6"	Syphons	6/-	6	6	-
196 - 4"	Elbows	1/8	16	6	8
12 - 9"	Split pipes Bends	2/-	1.	4	-
334 - 4"	" pipes	8d	11	2	8
20 - 12"	" "	3/-	3.	-	-
28m- 4"	Fresh Air Juncts	2/6	3	10	-
60 - 6"	Improved yard traps	15/-	45	-	-
80 - 4"	" " "	14/-	56	-	-
150 - 6"	Bends	1/8	12	10	-
37 - 4"	Double Junctions	2/6	4	12	6
940 - 15"	Pipes	4/9	223	5	-
1815 - 12"	"	3/2	287	7	6
2620 - 9"	"	2/2	283	16	8
4200 - 4"	"	10d	175	-	-
350 - 18"	"	6/4	110	16	8
2074 - 6"	"	1/1	112	6	10
1325 - 4"	Junctions	1/8	110	8	4
220 - 7"	"	3/-	33	-	-
750 - 4"	Insp. Junctions	5/8	212	10	-
900 - 4"	" Pipes	4/-	180	-	-
300 - 4" on 6"	Junctions	2/2	32	10	-
30 - 4"	Syphons	4/-	6	-	-
46 - 12"	Bends	4/9	10	18	6
100 - 9"	"	3/3	16	5	-
25 - 9"	Elbows	4/4	5	8	4
40 - 15"	Junctions	9/6	19	-	-
208 - 12"	"	6/6	67	12	-
364 - 9"	Junctions	4/4	78	17	4
19	Garden Rollers	10/-	9	10	-
15	Troughs	6/-	4	10	-
50 - 6"	P. Traps	12/-	30	-	-
37 - 6"	Buchans	15/-	27	15	-
470 - 4"	Buchans	9/6	223	5	-
840 - 4"	P. Traps	7/-	294	-	-
882 - 6"	Napiers	7/6	330	15	-
750 - 4"	Cesspits	4/6	168	15	-
84 - 18"	Junctions	12/8	53	4	-
130 - 3"	Pipes	9d	4	17	6
4/-	Grease Traps	32/-	6	8	-
200 - 6"	Split Pipes	1/-	10	-	-
154 - 3"	Junctions	1/6	11	11	-
70 - 9"	Cesspits	10/-	35	-	-
140 - 4"	Short Junctiosn	1/8	11	13	4

Pipe Stock
New Zealand Brick, Tile and Pottery Co. Ltd.
Pipe stock partial list.
September 30, 1914
(ICA)

Peter Stichbury teapot
Fired at Crum Brick, Tile and Pottery Co. Ltd.
Exhibited at the first NZSP Exhibition 1957,
Dunedin.
circa 1950's
H. approx 250mm
(PS)

Base of Stichbury vase
Fired at Crum showing early inscribed potters mark which represents initials and abstract bird design. "Could be a swallow."
circa 1950-1957
(TC)

Peter Stichbury vase detail
Fired at Crum Brick, Tile and Pottery Co. Ltd. Iron sand slip over buff body. Thrown at Ardmore.
circa late 1950's
H. 50mm (detail)
(TC)



Base of a Stichbury pot
Fired at Crum Brick, Tile and Pottery Co. Ltd.
Showing 2 stilt marks.
1950
(TC)

Peter Stichbury bottle
Fired at Crum Brick, Tile and Pottery Co. Ltd.
Manganese slip and ash on upper section.
circa early 1950's
H. 400mm
(TC)

Peter Stichbury vase
Fired at Crum Brick, Tile and Pottery Co. Ltd.
Kerikeri clay.
1951
H. 150mm
(TC)

132 High St
Greymouth

Mr. Crum

Dear Sir

Hope you received wire. I will accept offer but the thrower is classed as a higher skilled man but I can explain things when I see you. Regards Filter Press I do not know of any except C H.CH Let me tell you they are a expencive plant and what I have had to do with them and seen others, they are a constant expence and trouble and the amount of clay is not very great. Unless you are going in for expencive ware, you will find it far cheaper to pay a bit more per ton for a clean clay and either crush and mix, or make a small pit & soak it the latter way makes the best ware & is inexpencive. But if you want one Boltons supply ever thing that is required in a pottery I am bringing list with me also Wengers late list of glazes. I am anxious to make a start and if you care to take my advice I will do my best to make it a success. Just lately I have made a few peices for melting gold one of the trials stood to 1240C which is nearly 200 more than required also I had a sample crucible & muffel now there is great time here for that class of ware if a good fire clay can be got, also they fetch a big price. I hope it is the man I think is Mr Gardener. Would you be kind enough to ask some one to meet me shall arrive on Thursday evening all being well and in the mean time if you hear of house or rooms will you think of me.

Yours Faithfully
William Speer

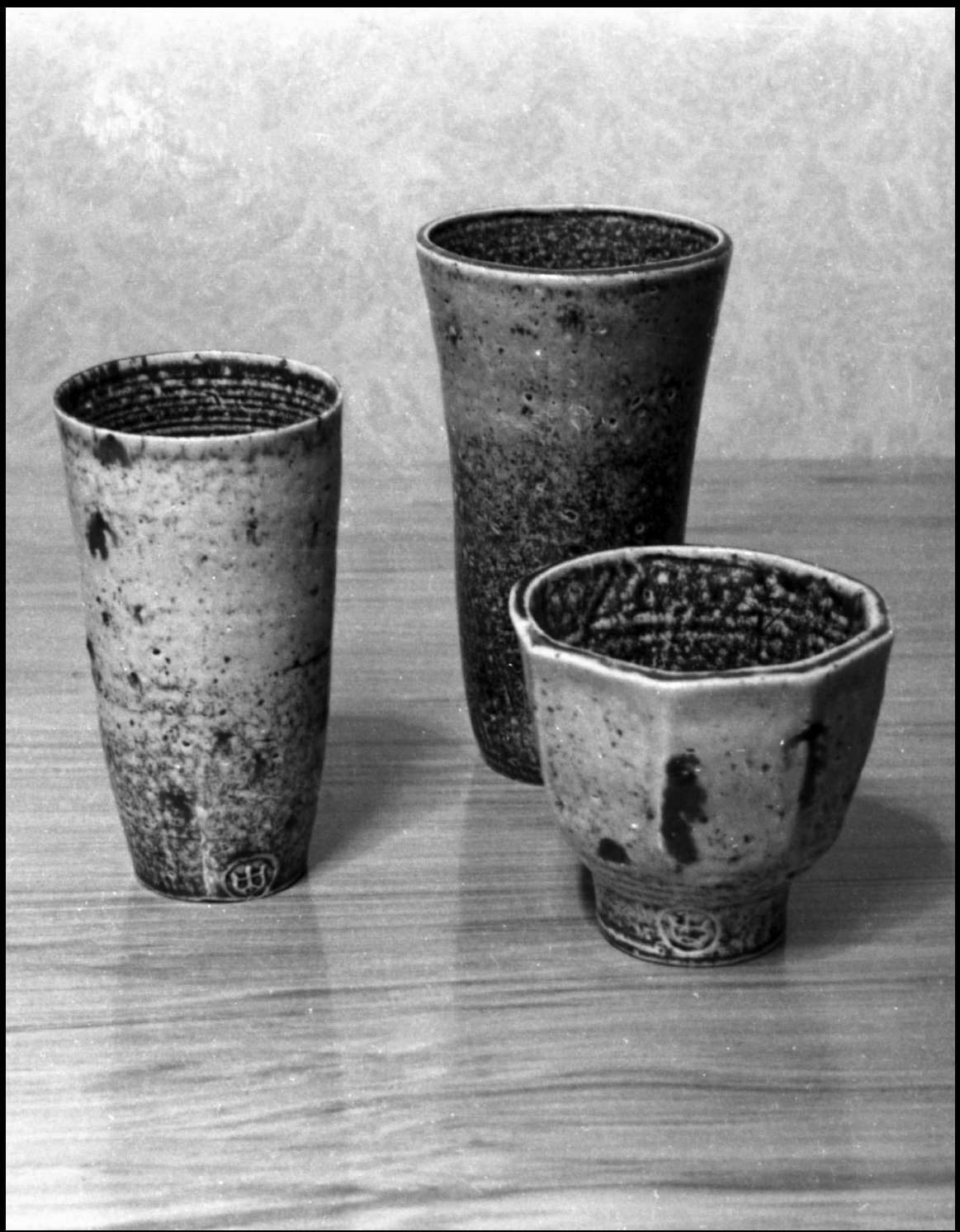
Letter to Albert Crum
Hand written letter to Albert Crum from William Speer.
Novermber 9th 1921, Greymouth
(ICA)

	NAME.			AWARD.	PAID.	
Pipe Making.						
Clay Pit.						
1. 79.	Berry,	S.		1/9½	1/9¾	
2. 40	Mijocevich,	J.		"	"	
3. 76	Herbert,	J		"	"	(left 3rd.)
					3	
Pipe Machine.						
1. 46.	Belcher,	S.	Sam	"	"	
2. 39.	Jerome,	A.		"	"	
3. 30.	McDonald,	H.	HARRY	"	1/10¾.	
4. 50.	Morton,	A.		"	"	
5. 67.	Sisson,	W.	BILL	30/6 weekly.	52/- weekly - Boy.	
6. 62.	Webb,	W.	BILL	1/9½	1/9¾	
7. 47	Willmott,	W.		"	1/10¾	
					7	
Stickers						
1. 54.	Barnsley,	A.	BERT	2/0½	2/5¼	Foreman 2/4
2. 48.	Crafts,	A.	ARTHUR	"	2/3¼	2/2
					2	
Moulders & Flangers						
1. 32.	Reed,	J.	JIM	2/1½	2/2¼	Flanger 2/2¼
2. 3.	Smith,	W.		"	"	"
					2	
Kiln						
1. 27.	Bennett,	C.J.		1/10½	1/10¾	
2. 19.	"	G.	GEORGE	"	2/-	
3. 6.	Fellows	E.		1/9½	1/9¾.	
4. 28.	Heron,	G.	GEORGE	1/10½	1/11¼.	
5. 25.	Worms,	A.	ARTHUR	"	2/5¼	Foreman. 2/4
6. 1.	"	M.		1/9½	1/10¼ - 1/9¾	
7. 33.	Young,	T.		1/10½	2/-	
					7 —	19
Fire Clay.						
1. 14.	Crane,	M.	Fire clay	2/1½	2/1¾	
Thrower.						
1. 82.	Speer,	W.	Potter	2/1½	2/1¾	
Engine Driver.						
1. 29.	Griffin,	J.	Engine driver	2/1	2/1¼	
Brick Making Foreman						
1. 16.	Morris,	W.	BILL		2/0¾.	

Wages of clay workers
New Zealand Brick, Tile and Pottery Co. Ltd.
December 1st 1922.
Note: William Speer working as a thrower.
(ICA)

Helen Yau salt glaze vase
"The Irrationals" series, 2002.
H. 170mm
(TC)
Previous page: **Pyrometric cones**
H. 50mm
(TC)

Helen Mason salt glazed vase detail
Waiohiki Arts Village.
circa 2006
H. 70mm
(TC)



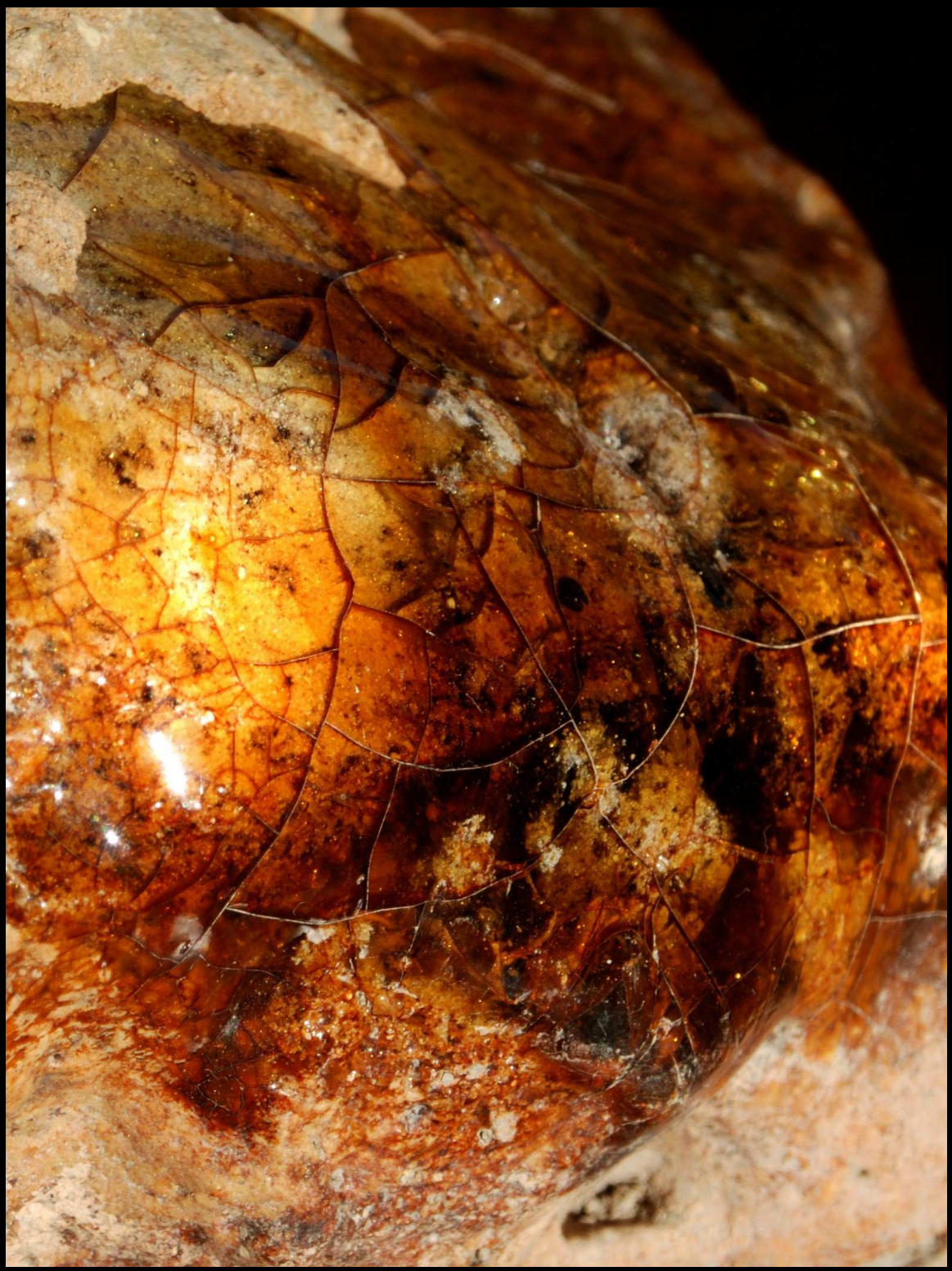
Terry Barrow salt glazed pots
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1952-54
(AP)

Anton Pausma with his Exacta camera used to photograph early Castle pots fired at Crum 1953. This Exacta camera was then sold to Castle and used on his trip to the Leach Pottery, St. Ives 1956-57. (AP)

Kiln wall glaze buildup
Clark's Potteries Ltd, New Lynn.
H. 50mm
(TC)

Kiln fragment
Clark's Potteries Ltd, New Lynn.
H. 30mm
(TC)

Sewer pipe glaze fragment with branding
R O Clark, Hobsonville.
H. 80mm
(TC)



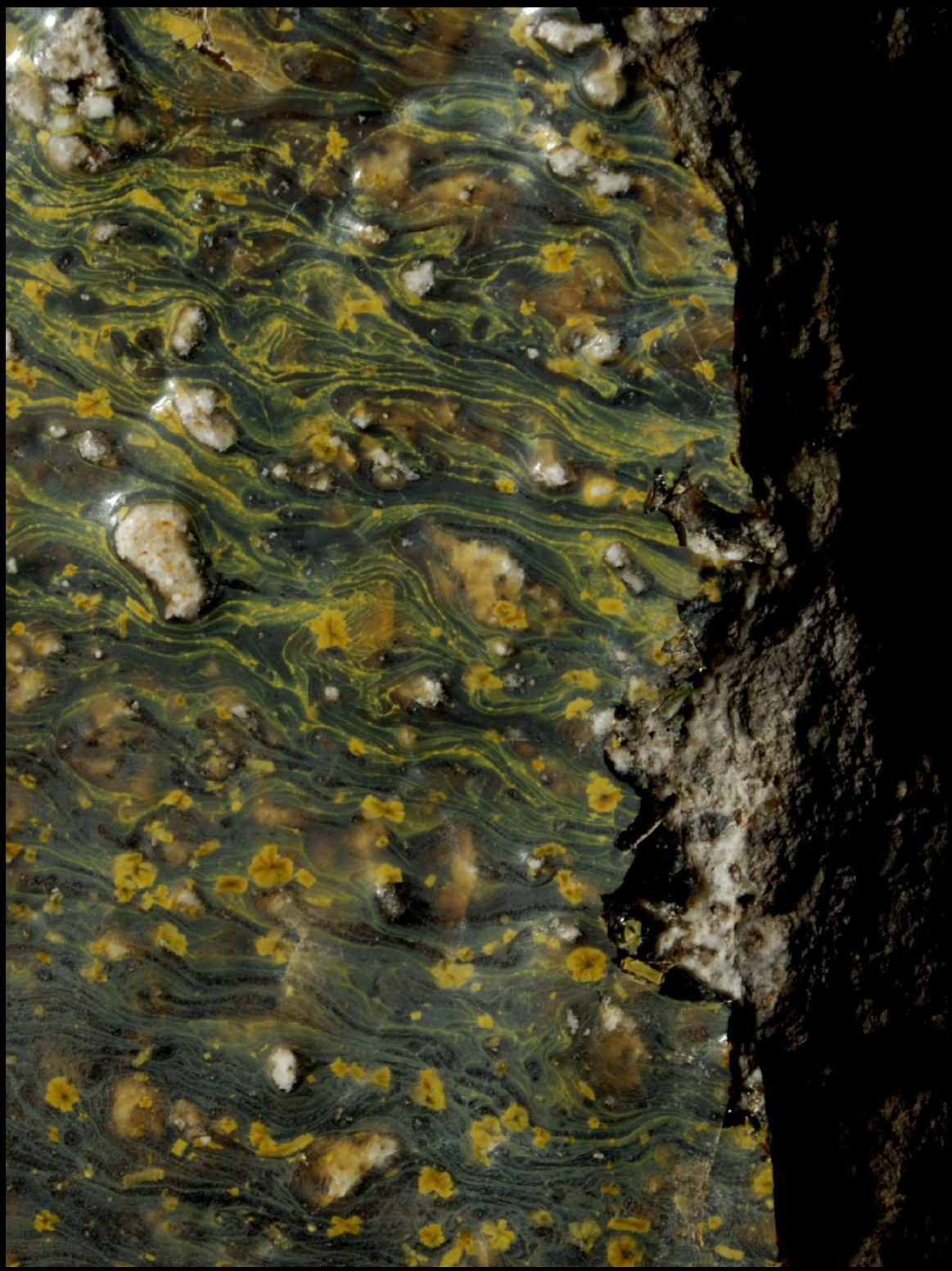
Kiln wall glaze buildup
H. 30mm
(TC)

Kiln slag droplet
H. 35mm
(TC)

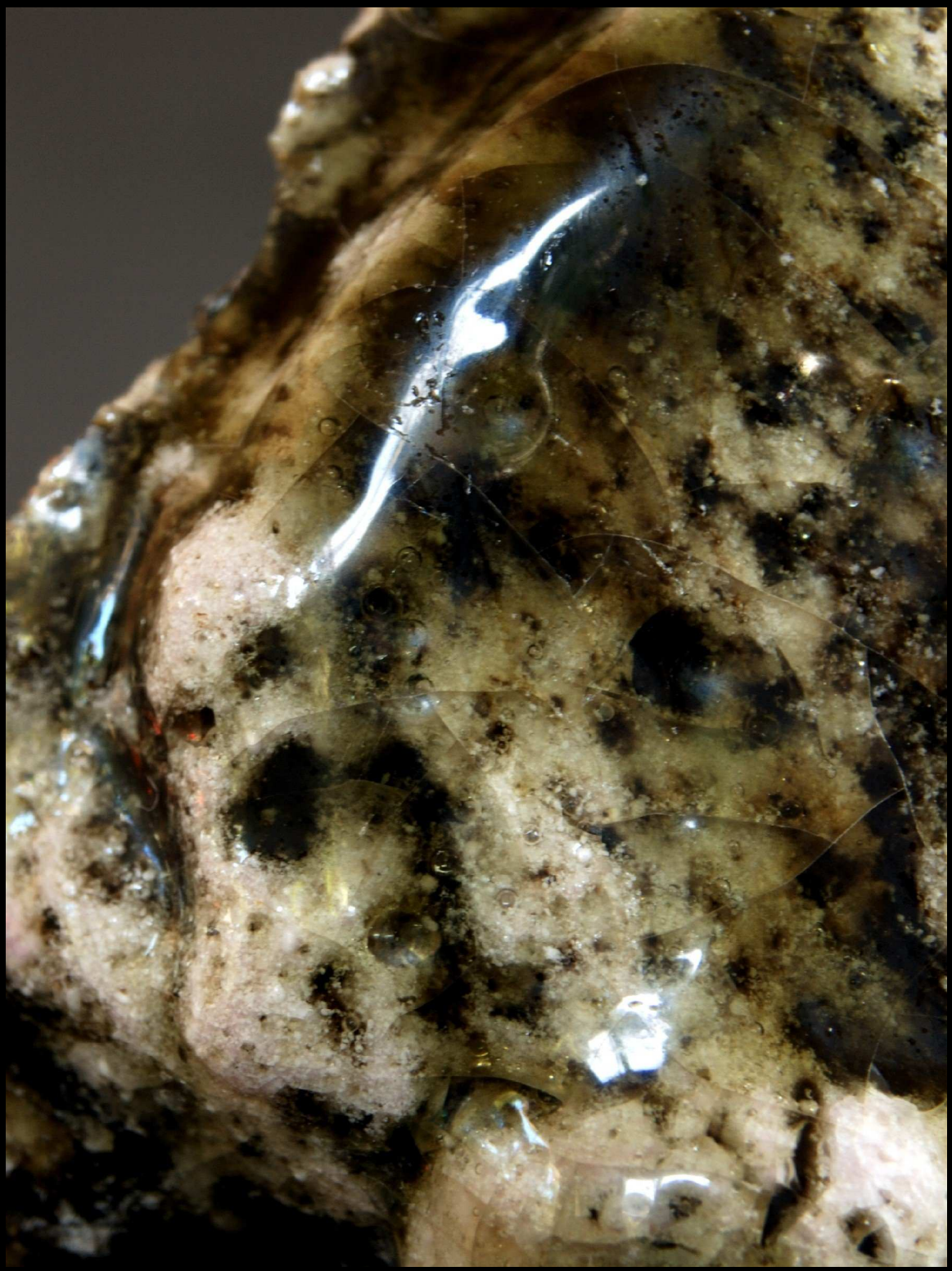
Kiln wall glaze buildup
H. 10mm
(TC)

Glaze buildup on kiln wall fragment
Clark's Potteries Ltd, New Lynn.
H. 10mm
(TC)

Salt glazed test ring
Hand formed
H. 50mm
(TC)



Detail of inner kiln wall glaze buildup
Clark's Potteries Ltd. New Lynn.
H. 20mm
(TC)



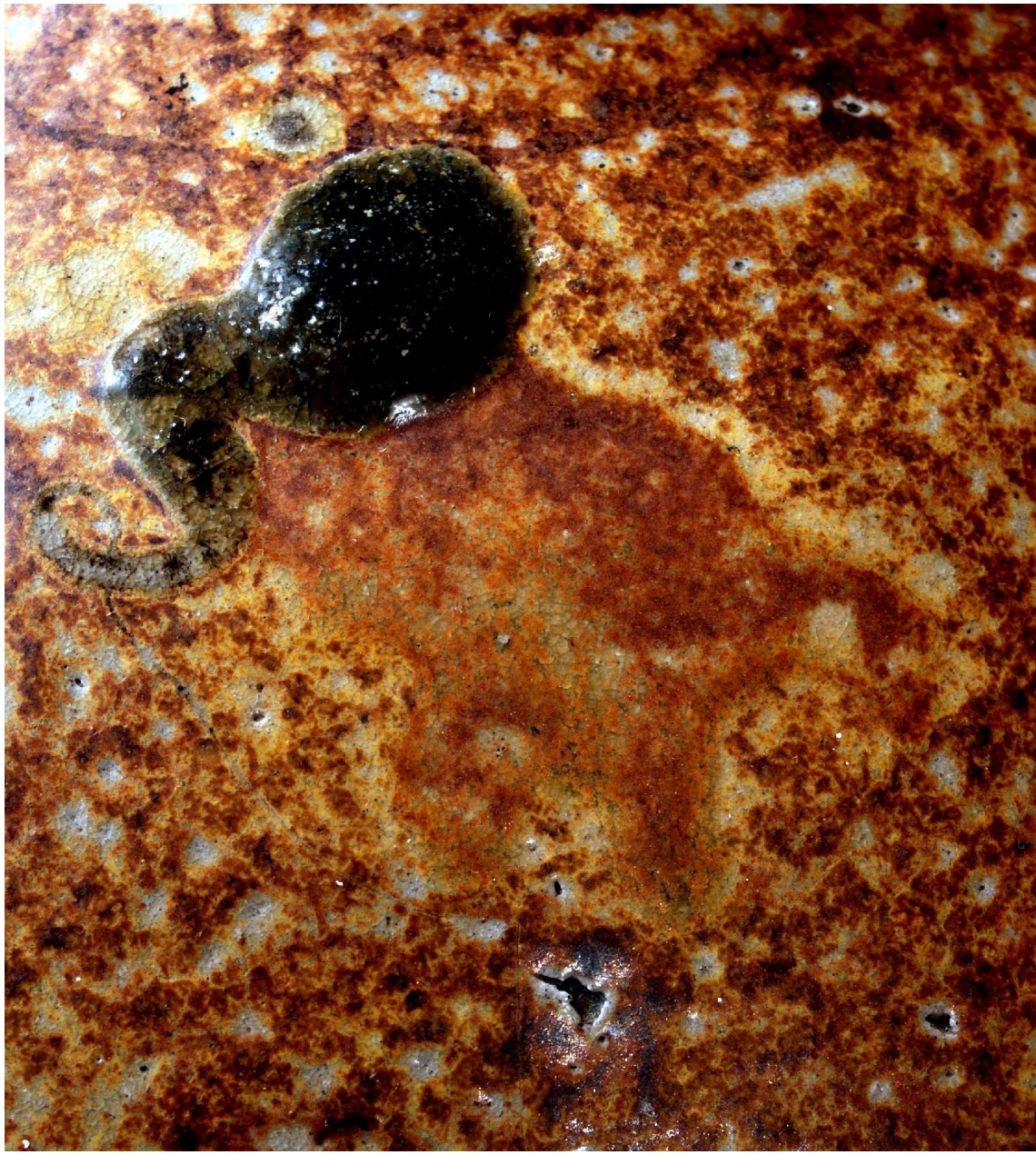
Salt glazed fragment with glaze buildup
Clark's Potteries Ltd, New Lynn
H. 25mm
(TC)

Cultured brick
Found at an Avondale demonlition yard.
Salt glazed and warped.
H. 225mm
(TC)

Ambrico Kiln
New Lynn.
Auckland 2011.
(TC)

Salt glazed fragment
Hand moulded.
H. 20mm
(TC)

Glazed fragment
Auckland Brick & Tile Co. Te Atatu.
H. 45mm
(TC)



Glaze Detail
Salt glazed droplet
H. 50mm
(TC)

Len Castle salt glazed vase
Fired at Crum Brick, Tile and Pottery Co. Ltd.
circa 1950's
H. 270mm
(TC)

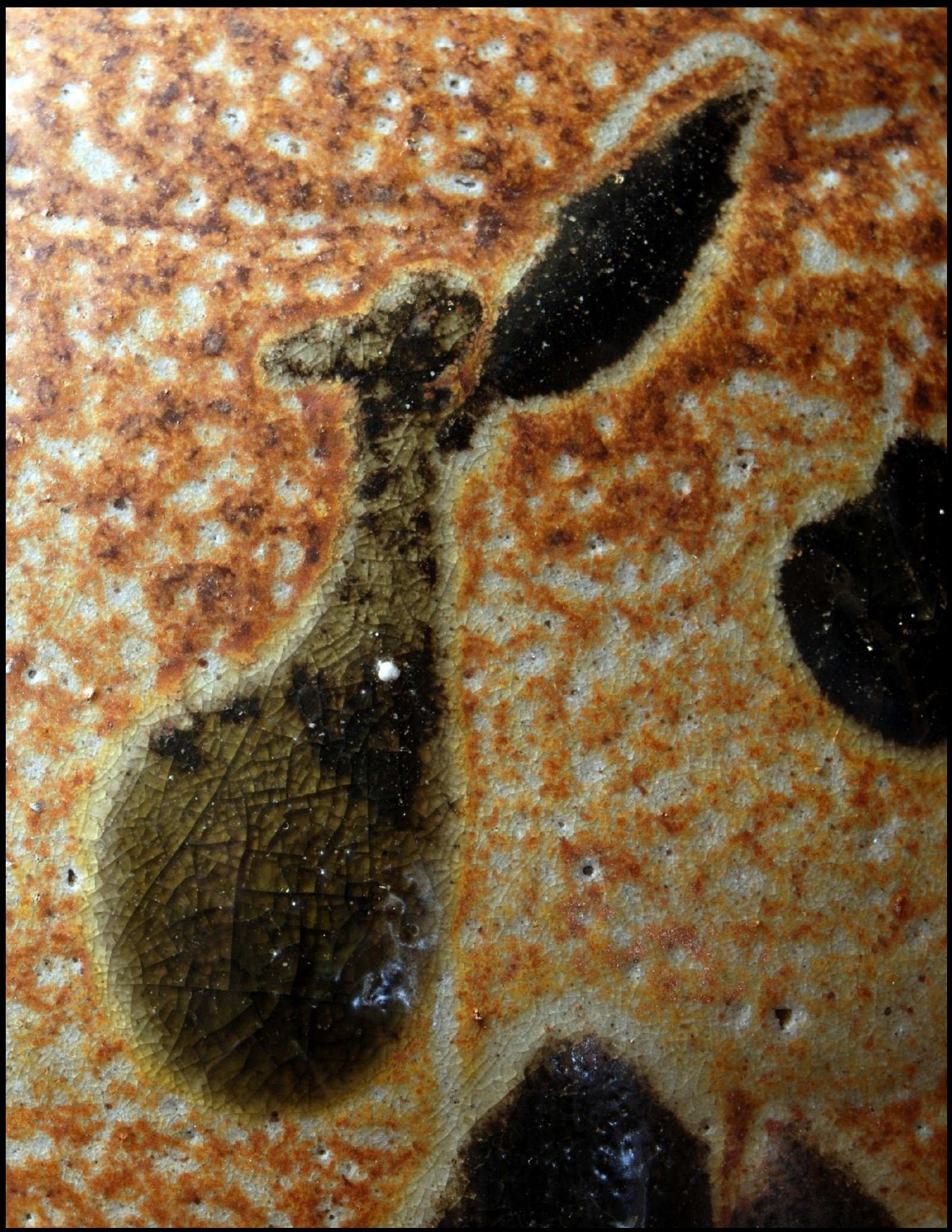
New Zealand Brick Co. New Lynn
Branding on salt glazed pipe section an abbreviated name for New Zealand Brick, Tile and Pottery Company Limited, 'New Lynn'
W. 40mm
(TC)

New Zealand Brick, Tile and Pottery Co. Ltd.
Salt glazed pipe detail showing hand inscribed combing.
H. 70mm
(TC)

Salt glazed kiln debris
H. 50mm
(TC)
Previous page: **Crum Brick, Tile and Pottery Co. Ltd.**
Four inch pipe showing the flanged end.
H. 130mm
(TC)

Salt glazed storage pot
Roughly formed two tier barrel form with
uneven cut Kauri lid.
H. 280mm
(TC)

Large salt glazed stoneware crock
Originally covered in cane.
Possibly from the South Island
Note the lines of banding at the neck and shoulder.
H. 370mm
(TC)



Glaze detail
Salt glaze kiln drop from crock opposite.
H. 80mm
(TC)

Small salt glazed pot
Possibly fired at Crum Brick, Tile and Pottery Co. Ltd.
Unknown maker.
H. 100mm
(TC)

Detail of salt glazed brick
NZ Brick, Tile and Pottery Co, 'New Lynn'. Impressed texture on three sides made with a wooden roller hand carved by Albert Crum. Bricks of this type were intended for fireplace surrounds.
circa. 1915-22
H. 79mm
(TC)

Glaze detail
Crum Brick, Tile and Pottery Co. Ltd. Salt glazed 6 inch square junction pipe.
H. 30mm
(TC)

Glaze detail
Crum Brick, Tile and Pottery Co. Ltd. Salt glazed
6 inch square junction pipe, spigot end showing
hand combing on the out side of the pipe.
H. 50mm
(TC)

Glaze detail
Crum Brick, Tile and Pottery Co. Ltd.
Salt glazed 6 inch square junction pipe .
H. 20mm
(TC)

Six inch square junction
Crum Brick, Tile and Pottery Co. Ltd. Salt glazed pipe section showing branding and the letter R which is the initial of the pipe sticker, used for quality control.
H. 300mm
(TC)

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A Chimney Topples
The 26 metre tall Crum Brick, Tile and Pottery Co. Ltd. chimney finally falls after 53 years service.
(ICA)

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